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The U.S. Financial Crisis: The Global Dimension with Implications for U.S. Policy

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The U.S. Financial Crisis: The Global Dimension with Implications for U.S. Policy

Summary

What began as a bursting of the U.S. housing market bubble and a rise in foreclosures has ballooned into a global financial crisis. Some of the largest and most venerable banks, investment houses, and insurance companies have either declared bankruptcy or have had to be rescued financially. In October 2008, credit flows froze, lender confidence dropped, and one after another the economies of countries around the world dipped toward recession. The crisis exposed fundamental weaknesses in financial systems worldwide, and despite coordinated easing of monetary policy by governments and trillions of dollars in intervention by governments and the International Monetary Fund, the crisis continues.

The process for coping with the crisis by countries across the globe has been manifest in four basic phases. The first has been intervention to contain the contagion and restore confidence in the system. This has required extraordinary measures both in scope, cost, and extent of government reach. The second has been coping with the secondary effects of the crisis, particularly the slowdown in economic activity and flight of capital from countries in emerging markets and elsewhere who have been affected by the crisis. The third phase of this process is to make changes in the financial system to reduce risk and prevent future crises. In order to give these proposals political backing, world leaders have called for international meetings to address changes in policy, regulations, oversight, and enforcement. Some are characterizing these meetings as Bretton Woods II. An "international summit meeting" of world leaders under the Group of 20 umbrella has been scheduled for November 15, 2008, in Washington, DC. The fourth phase of the process is dealing with political and social effects of the financial turmoil.

The role for Congress in this financial crisis is multifaceted. A major issue is how to ensure the smooth and efficient functioning of financial markets to promote the general well-being of the country while protecting taxpayer interests and facilitating business operations without creating a moral hazard. In addition to preventing future crises through legislative, oversight, and domestic regulatory functions, Congress has been providing funds and ground rules for economic stabilization packages and informing the public through hearings and other means. The largest question may be how U.S. regulations should be changed, if necessary, and how closely any changes are harmonized with international recommendations. Other questions include: should the United States promote global regulatory standards to be voluntarily adopted by countries or should a supranational regulatory institution be created that would impose rules on international financial markets? Where would enforcement authority reside; at the state, national, or international level? Congress also plays a role in measures to reform international financial institutions and in recapitalizing the International Monetary Fund. Also, should U.S. policies be designed to restore confidence in and induce return to the normal functioning of a self-correcting financial system or has the system, itself, become inherently unstable?

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Recent Developments and Analysis[1]

October 29. The **International Monetary Fund** announced it would lend up to $100 billion to healthy countries that are having trouble borrowing as a result of the turmoil in the global markets. The **Federal Reserve** said it would commit up to $30 billion each to **Brazil, Mexico, South Korea, and Singapore** to enable those countries to more easily swap their currencies for dollars. These agreements are similar to swaps the Federal Reserve has set up with the Bank of Japan, the Reserve Bank of Australia, the European Central Bank and others to ease the credit crisis in developed economies. The Federal Reserve also lowered its benchmark Federal Funds interest rate by half a percentage point. This was followed on **November 6** by similar actions by the European Central Bank, Denmark, Czech Republic, and South Korea.

October 26-28. The IMF and others announced financing packages for **Iceland, Ukraine, and Hungary. Pakistan** also has sought help from the IMF.

- Although credit markets are loosening, many countries face rapidly deteriorating macroeconomic conditions, further declines in stock market values, and the prospect of reduced growth, stagnation, or even recession. According to the IMF, prospects for global growth have deteriorated. It expects activity in the advanced economies to contract by ¼ percent in 2009 — the first annual contraction during the postwar period — and in emerging economies, growth is projected to slow appreciably but still reach 5% overall. The IMF called for additional macroeconomic policy stimulus.

- The Treasury is rapidly using up the $700 billion authorized by Congress under the Emergency Economic Stabilization Act of 2008.

- The Federal Reserve seems to have moved from a case-by-case crisis management approach to a more comprehensive attack on deflationary forces in the economy and on credit markets.

- Some of the issues of the G-20 leaders' summit scheduled for November 15, 2008, in Washington, DC, include: a common approach for global governance in the financial sector, strengthening international regulatory standards and coordination, and developing

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[1] For a more complete list of major developments and actions, see **Appendix B**.

> the capacity to address financial crises at the national, regional, and multilateral levels with possibly a February 2009 date for initiation. The also may include calls to pursue financial reforms that promote anti-poverty and climate change efforts and world trade talks.

The Global Financial Crisis and U.S. Interests[2]

What began as a bursting of the U.S. housing market bubble and a rise in foreclosures has ballooned into a global financial and economic crisis. Some of the largest and most venerable banks, investment houses, and insurance companies have either declared bankruptcy or have had to be rescued financially. In October 2008, credit flows froze, lender confidence dropped, and one after another the economies of countries around the world dipped toward recession. The crisis exposed fundamental weaknesses in financial systems worldwide, and despite coordinated easing of monetary policy by governments and trillions of dollars in intervention by central banks and governments, the crisis seems far from over.

This financial crisis which began in industrialized countries quickly entered a second phase in which emerging market and other economies have been battered. Investors have pulled capital from countries, even those with small levels of perceived risk, and caused values of stocks and domestic currencies to plunge. Also, slumping exports and commodity prices have added to the woes, pushing economies world wide toward recession. The global crisis now seems to be played out on two levels. The first is among the industrialized nations of the world where most of the losses from subprime mortgage debt, excessive leveraging of investments, and inadequate capital backing credit default swaps (insurance against defaults and bankruptcy) have occurred. The second level of the crisis is among emerging market and other economies who may be "innocent bystanders" to the crisis but who also may have less resilient economic systems that can often be whipsawed by actions in global markets. Most industrialized countries (except for Iceland) seem to able to finance their own rescue packages by borrowing domestically and in international capital markets, but emerging market economies may have insufficient sources of capital and may have to turn to help from the International Monetary Fund (IMF) or from capital surplus nations, such as Russia, Japan, and the European Union.

For the United States, the financial turmoil touches on the fundamental national interest of protecting the economic security of Americans. It also is affecting the United States in achieving national goals, such as stability, maintaining cooperative relations with other nations, and supporting a financial infrastructure that allows for the smooth functioning of the international economy. Reverberations from the financial crisis, moreover, are not only being felt on Wall Street and Main Street but are being manifest in world flows of exports and imports, rates of growth and unemployment, and government revenues and expenditures. The rapidity with which growth is slowing in countries seems to indicate that this global downturn is not a just a phase in the usual cycle of business.

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[2] Prepared by Dick K. Nanto, Specialist in Industry and Trade, Foreign Affairs, Defense, and Trade Division.

A single global financial market now seems to be an economic reality, and financial troubles also affect the goods-and-services-producing sectors of the economy. As the force of the effects of the global financial market are felt, popular and congressional concern may grow. Is the system too complex to be controlled, or is it an insider's game at the expense of Main Street? Opposition to globalization from various quarters may work to shape the debate over rewriting U.S. and international financial rules.

The global financial crisis has brought home an important point: the United States is still a major center of the financial world. Regional financial crises (such as the Asian financial crisis, Japan's banking crisis, or the Latin American debt crisis) can occur without seriously infecting the rest of the global financial system. But when the U.S. financial system stumbles, it may bring major parts of the rest of the world down with it.[3] The reason is that the United States is the main guarantor of the international financial system, the provider of dollars widely used as currency reserves and as an international medium of exchange, and a contributor to much of the financial capital that sloshes around the world seeking higher yields. The rest of the world may not appreciate it, but a financial crisis in the United States often takes on a global hue. Emerging market economies, in particular, have not de-coupled from the U.S. economy.

The process as it has played in countries across the globe has been manifest in four basic phases. The first phase has been intervention to stop the financial bleeding, to coordinate interest rate cuts, and pursue actions to restart and restore confidence in credit markets. This has involved decisive (and, in cases, unprecedented) measures both in scope, cost, and extent of government reach. Actions taken include the rescue of financial institutions considered to be "too big to fail," injections of capital, government takeovers of certain financial institutions, government guarantees of bank deposits and money market funds, and government facilitation of mergers and acquisitions. (See **Tables 3 and 5**.)

The second phase of this process is less innovative as countries cope with the macroeconomic impact of the crisis on their economies, firms, and investors. Many of these countries, particularly those with emerging markets, have been pulled down by the ever widening flight of capital from risk and by falling exports and commodity prices. Governments have turned to traditional monetary and fiscal policies to deal with recessionary economic conditions, declining tax revenues, and rising unemployment, and several have turned to funding from the IMF, World Bank, and capital surplus countries. The IMF and others are in the process of providing financing packages for Iceland ($2.1 billion), Ukraine ($16.5 billion), and Hungary ($25.1 billion). Other countries in talks with the IMF are Belarus and Pakistan. In addition, nations, both industrialized and emerging, facing difficult economic conditions include some other countries of the Former Soviet Union, Mexico, Argentina, South Korea, Indonesia, Spain, and Italy.

The third phase of the process (to decide what changes may be needed in the financial system) is also underway. While monetary authorities battled the financial

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[3] See, for example, Friedman, George and Peter Zeihan. "The United States, Europe and Bretton Woods II." A Strafor Geopolitical Intelligence Report, October 20, 2008.

conflagration and slowdown in economic growth, the question of what changes are necessary to prevent future crises had been left primarily to observers and academics. As the triage has been applied and the crisis has ebbed somewhat, attention can now be turned to long-term solutions to the problems. In order to give these proposals political backing, world leaders have called for international meetings to address changes in policy, regulations, oversight, and enforcement. Some are characterizing these meetings as Bretton Woods II.[4] An "international summit meeting" of world leaders under the Group of 20 umbrella has been scheduled for November 15, 2008, in Washington, DC.

In this third phase, the immediate issues to be addressed by the United States center on "fixing the system" and preventing future crises from occurring. Much of this involves the technicalities of regulation and oversight of financial markets, derivatives, and hedging activity, as well as standards for capital adequacy and a schema for funding and conducting future financial interventions, if necessary. Some of the short-term issues that have been raised (and are discussed later in this paper or other CRS reports) include:

- weakness in fundamental underwriting principles,
- the build-up of massive risk concentrations in firms,
- the originate-to-distribute model of mortgage lending,
- insufficient bank liquidity and capital buffers,[5]
- no overall regulatory structure for banks, brokerages, insurance, and futures,
- lack of a regulatory ties between macroeconomic variables and prudential oversight, and
- how financial rescue packages should be structured.

For the United States, the fundamental issues may be the degree to which U.S. laws and regulations are to be altered to conform to international norms and standards and the degree to which the country is willing to cede authority to an international watchdog and regulatory agency. What form should any new international financial architecture take? Should the Bretton Woods system be changed from one in which the United States is the buttress of the international financial architecture to one in which the United States remains the buttress but its financial markets are more "Europeanized" (more in accord with Europe's practices) and more constrained by the broader international financial order? Should the international financial architecture be merely strengthened or include more control, and if more controls, then by whom?[6] What is the time frame for a new architecture that may take years to materialize?

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[4] The Bretton Woods Agreements in 1944 established the basic rules for commercial and financial relations among the world's major industrial states and also established what has become the World Bank and International Monetary Fund.

[5] Wellink, Nout. "Responding to Uncertainty," Remarks by the Chairman of the Basel Committee on banking supervision at the International Conference of Banking Supervisors 2008, Brussels, September 24, 2008.

[6] Friedman, George and Peter Zeihan. "The United States, Europe and Bretton Woods II." A Strafor Geopolitical Intelligence Report, October 20, 2008.

The fourth phase of the process is dealing with political and social effects of the financial turmoil. These are secondary effects that relate to the role of the United States on the world stage, its leadership position relative to other countries, and the political and social impact within countries affected by the crisis. For example, European leaders (particularly British Prime Minister Gordon Brown, French President Nicolas Sarkozy, and German Chancellor Angela Merkel) have been playing a major role during the crisis, particularly in Europe, and have been influential in crafting international policies to deal with adverse effects of the crisis as well as proposing long-term solutions. The end-of-term status of President George W. Bush may have contributed to this situation, but over the longer-run, will the financial crisis work to diminish the influence of the United States and its dollar in financial circles relative to Europe and its Euro/pound? This may occur in spite of the "flight to safety" into dollar assets during the crisis. Dealing with the financial crisis also may enable countries with rich currency reserves, such as China, Russia, and Japan, to assume higher political profiles in world financial circles. The inclusion of China, India, and Brazil in the "international financial summit" on November 15, 2008, rather than just the G-7 or G-8 countries as originally proposed, seems to indicate the growing influence of the non-industrialized nations in addressing global financial issues.[7]

The effects of the crisis also may impede the ability of the United States to carry out certain U.S. goals. For example, the financial crisis comes at time of global food shortages and has been causing recessions in countries or at least their growth rates to decline. As economic conditions in developing countries worsen, requests for economic and humanitarian assistance are likely to increase. This coincides, however, with a slowdown in government revenues and huge costs for financial rescue packages that may reduce the U.S. ability to increase funding for aid or other programs. Also, if China helps to finance the various rescue measures in the United States, Washington may lose some leverage with Beijing in pursuing human and labor rights, product safety, and other pertinent issues. The precipitous drop in the price of oil, moreover, holds important implications for countries, such as Russia, Mexico, Venezuela, and other petroleum exporters, who were counting on oil revenues to continue to pour into their coffers to fund activities considered to be essential to their interests. While moderating oil prices may be a positive development for the U.S. consumer and for the U.S. balance of trade, it also may affect the political stability of certain petroleum exporting countries. The concomitant drop in prices of commodities such as rubber, copper ore, iron ore, beef, rice, coffee, and tea also carries dire consequences for exporter countries in Africa, Latin America, and Asia.[8]

The role for Congress in this financial crisis is multifaceted. One issue is how to ensure the smooth and efficient functioning of financial markets to promote the

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[7] The G-7 includes Canada, France, Germany, Italy, Japan, United Kingdom, and the United States. The G-8 is the G-7 plus Russia. The G-20 adds Argentina, Australia, Brazil, China, India, Indonesia, Mexico, Saudi Arabia, South Africa, South Korea, and Turkey.

[8] Johnston, Tim. "Asia Nations Join to Prop Up Prices," *Washington Post*, November 1, 2008, p. A10. "Record Fall in NZ Commodity Price Gauge," *The National Business Review*, November 5, 2008.

general well-being of the country while protecting taxpayer interests and facilitating business operations without creating a moral hazard.[9] In addition to preventing future crises through legislative, oversight, and domestic regulatory functions, Congress has been providing funds and ground rules for economic stabilization packages and informing the public through hearings and other means. Congress also plays a role in measures to reform the international financial system and in recapitalizing international financial institutions such as the International Monetary Fund.

Origins, Contagion, and Risk[10]

Financial crises of some kind occur sporadically virtually every decade and in various locations around the world. Financial meltdowns have occurred in countries ranging from Sweden to Argentina, from Russia to Korea, from the United Kingdom to Indonesia, and from Japan to the United States.[11] As one observer noted: as each crisis arrives, policy makers express ritual shock, then proceed to break every rule in the book. The alternative is unthinkable. When the worst is passed, participants renounce crisis apostasy and pledge to hold firm next time.[12]

Each financial crisis is unique, yet each bears some resemblance to others. In general, crises have been generated by factors such as an overshooting of markets, excessive leveraging of debt, credit booms, miscalculations of risk, rapid outflows of capital from a country, mismatches between asset types (e.g., short-term dollar debt used to fund long-term local currency loans), unsustainable macroeconomic policies, off-balance sheet operations by banks, inexperience with new financial instruments, and deregulation without sufficient market monitoring and oversight.

As shown in **Figure 1**, the current crisis harkens back to the 1997-98 Asian financial crisis in which Thailand, Indonesia, and South Korea had to borrow from the International Monetary Fund to service their short-term foreign debt and to cope with a dramatic drop in the values of their currency and deteriorating financial condition.[13] Determined not to be caught with insufficient foreign exchange reserves,

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[9] A moral hazard is created if a government rescue of private companies encourages those companies and others to engage in comparable risky behavior in the future, since the perception arises that they will again be rescued if necessary and not have to carry the full burden of their losses.

[10] Prepared by Dick K. Nanto. See also, CRS Report RL34730, *The Emergency Economic Stabilization Act and Current Financial Turmoil: Issues and Analysis*, by Baird Webel and Edward V. Murphy.

[11] For a review of past financial crises, see: Luc Laeven and Fabian Valencia. "Systemic Banking Crises: A New Database," International Monetary Fund Working Paper WP/08/224, October 2008. 80p.

[12] Gelpern, Anna. "Emergency Rules," *The Record* (Bergen-Hackensack, NJ), September 26, 2008.

[13] During the Asian financial crisis in 1997, the IMF, World Bank, Asian Development

(continued...)

countries subsequently began to accumulate dollars, Euros, pounds, and yen in record amounts. This was facilitated by the U.S. trade (current account) deficit.[14] By mid-2008, world currency reserves by governments had reached $4.4 trillion with China's reserves alone approaching $2 trillion, Japan's nearly $1 trillion, Russia's more than $500 billion, and India, South Korea, and Brazil each with more than $200 billion.[15] The accumulation of hard currency assets was so great in some countries that they diverted some of their reserves into sovereign wealth funds that were to invest in higher yielding assets than U.S. Treasury and other government securities.[16]

Following the Asian financial crisis, much of the world's "hot money" began to flow into high technology stocks. The so-called "dot-com boom" ended in the spring of 2000 as the value of equities in many high-technology companies collapsed.

After the dot-com bust, more "hot investment capital" began to flow into housing markets — not only in the United States but in other countries of the world. This housing boom coincided with greater popularity of the securitization of assets, particularly mortgage debt (including subprime mortgages), into collateralized debt obligations (CDOs).[17] A problem was that the mortgage originators often were mortgage finance companies whose main purpose was to write mortgages using funds provided by banks and other financial institutions or borrowed. They were paid for each mortgage originated but had no responsibility for loans gone bad. Of course, the incentive for them was to maximize the number of loans concluded. This coincided with political pressures to enable more Americans to buy homes, although it appears that Fannie Mae and Freddie Mac were not directly complicit in the loosening of lending standards and the rise of subprime mortgages.[18]

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[13] (...continued)
Bank, the United States, and Japan provided financial support packages to Thailand ($17.2 billion), Indonesia ($42.3 billion), and South Korea ($58.2 billion).

[14] From 2005-2007, the U.S. current account deficit (balance of trade, services, and unilateral transfers) was a total of $2.2 trillion.

[15] Reuters. Factbox — Global foreign exchange reserves. October 12, 2008.

[16] See CRS Report RL34336, *Sovereign Wealth Funds: Background and Policy Issues for Congress*, by Martin A. Weiss.

[17] For further analysis, see CRS Report RL34412, *Averting Financial Crisis*, by Mark Jickling.

[18] Fannie Mae (Federal National Mortgage Association) is a government-sponsored enterprise (GSE) chartered by Congress in 1968 as a private shareholder-owned company with a mission to provide liquidity and stability to the U.S. housing and mortgage markets. It operates in the U.S. secondary mortgage market and funds its mortgage investments primarily by issuing debt securities in the domestic and international capital markets. Freddie Mac (Federal Home Loan Mortgage Corp) is a stockholder-owned GSE chartered by Congress in 1970 as a competitor to Fannie Mae. It also operates in the secondary mortgage market. It purchases, guarantees, and securitizes mortgages to form mortgage-backed securities. For an analysis of Fannie Mae and Freddie Mac's role in the subprime crisis, see David Goldstein and Kevin G. Hall, "Private sector loans, not Fannie or Freddie, triggered crisis," McClatchy Newspapers, October 12, 2008.

In order to cover the risk of defaults on mortgages, particularly subprime mortgages, the holders of CDOs purchased credit default swaps[19] (CDSs). These are a type of insurance contract (a financial derivative) that lenders purchase against the possibility of credit event (a default on a debt obligation, bankruptcy, restructuring, or credit rating downgrade) associated with debt, a borrowing institution, or other referenced entity. The purchaser of the CDS does not have to have a financial interest in the referenced entity, so CDSs quickly became more of a speculative asset than an insurance policy. As long as the credit events (defaults) never occurred, issuers of CDSs could earn huge amounts in fees relative to their capital base (since these were technically not insurance, they did not fall under insurance regulations requiring sufficient capital to pay claims, although credit derivatives requiring collateral became more and more common in recent years). The sellers of the CDSs that protected against defaults often covered their risk by turning around and buying CDSs that paid in case of default. As the risk of defaults rose, the cost of the CDS protection rose. Investors, therefore, could arbitrage between the lower and higher risk CDSs and generate large income streams with what was perceived to be minimal risk.

In 2007, the notional value (face value of underlying assets) of credit default swaps had reached $62 trillion, more than the combined gross domestic product of the entire world ($54 trillion),[20] although the actual amount at risk was only a fraction of that amount. By July 2008, the notional value of CDSs had declined to $54.6 trillion and by October 2008 to an estimated $46.95 trillion.[21] The system of CDSs generated large profits for the companies involved until the default rate, particularly on subprime mortgages, and the number of bankruptcies began to rise. Soon the leverage that generated outsized profits began to generate outsized losses, and in October 2008, the exposures became too great for companies such as AIG.

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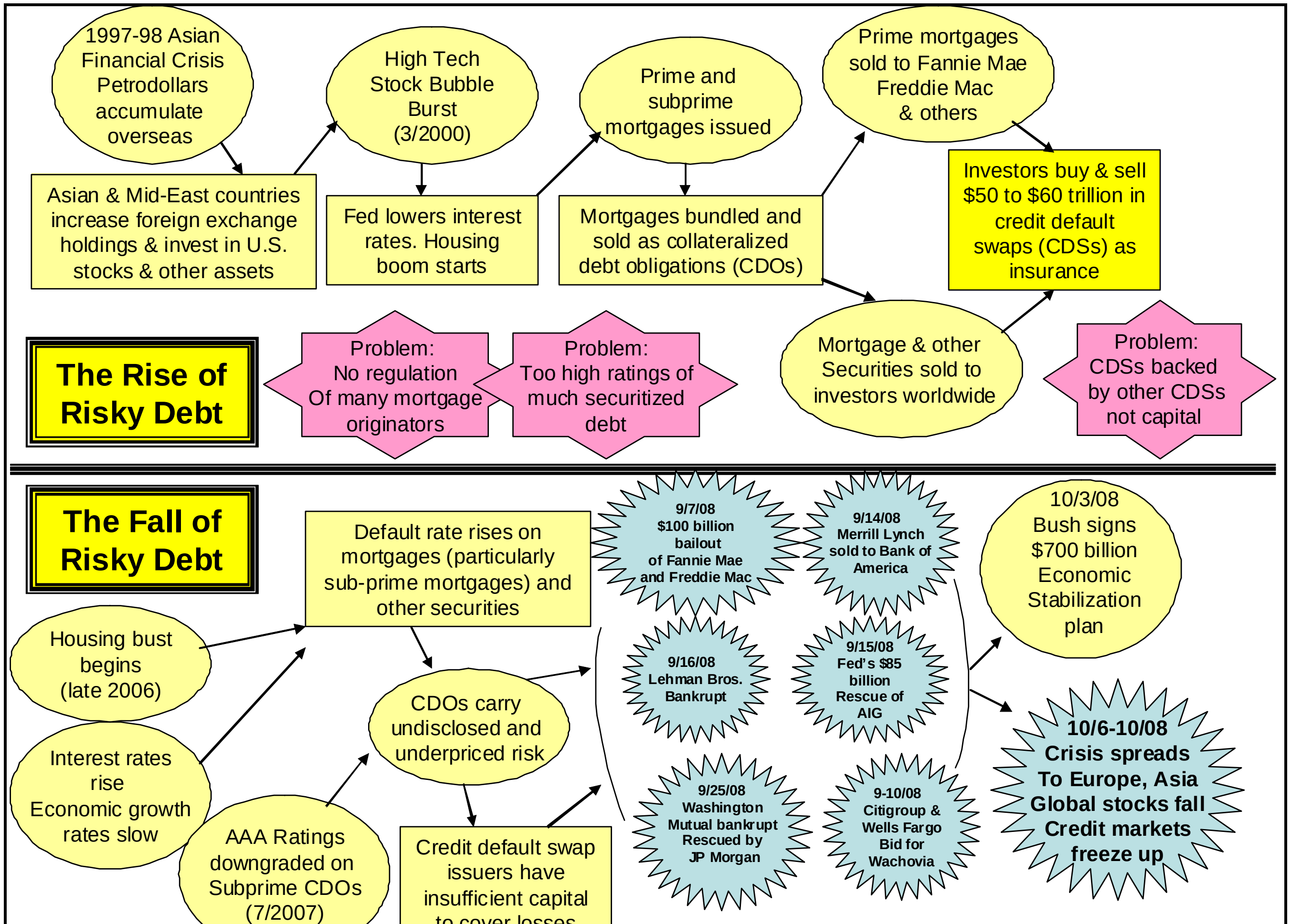
[19] A credit default swap is a credit derivative contract in which one party (protection buyer) pays a periodic fee to another party (protection seller) in return for compensation for default (or similar credit event) by a reference entity. The reference entity is not a party to the credit default swap. It is not necessary for the protection buyer to suffer an actual loss to be eligible for compensation if a credit event occurs. The protection buyer gives up the risk of default by the reference entity, and takes on the risk of simultaneous default by both the protection seller and the reference credit. The protection seller takes on the default risk of the reference entity, similar to the risk of a direct loan to the reference entity. See CRS Report RS22932, *Credit Default Swaps: Frequently Asked Questions*, by Edward V. Murphy.

[20] Notional value is the face value of bonds and loans on which participants have written protection. World GDP is from World Bank. Development Indicators.

[21] International Swaps and Derivatives Association, ISDA Applauds $25 Trn Reductions in CDS Notionals, Industry Efforts to Improve CDS Operations. News Release, October 27, 2008.

Figure 1. Origins of the Financial Crisis: The Rise and Fall of Risky Mortgage and Other Debt



Source: CRS

Risk

The origins of the financial crisis point toward three developments that increased risk in financial markets. The first was the originate-to-distribute model for mortgages. The originator of mortgages passed them on to the provider of funds or to a bundler who then securitized them and sold the collateralized debt obligation to investors. This recycled funds back to the mortgage market and made mortgages more available. However, the originator was not penalized, for example, for not ensuring that the borrower was actually qualified for the loan, and the buyer of the securitized debt had little detailed information about the underlying quality of the loans. Investors depended heavily on ratings by credit agencies.

The second development was a rise of perverse incentives and complexity for credit rating agencies. Credit rating firms received fees to rate securities based on information provided by the issuing firm using their models for determining risk. Credit raters, however, had little experience with credit default swaps at the "systemic failure" tail of the probability distribution. The models seemed to work under normal economic conditions but had not been tested in crisis conditions. Credit rating agencies also may have advised clients on how to structure securities in order to receive higher ratings. In addition, the large fees offered to credit rating firms for providing credit ratings were difficult for them to refuse in spite of doubts they might have had about the underlying quality of the securities. The perception existed that if one credit rating agency did not do it, another would.

The third development was the blurring of lines between issuers of credit default swaps and traditional insurers. In essence, financial entities were writing a type of insurance contract without regard for insurance regulations and requirements for capital adequacy (hence, the use of the term "credit default swaps" instead of "credit default insurance"). Much risk was hedged rather than backed by sufficient capital to pay claims in case of default. Under a systemic crisis, hedges also may fail. However, although the CDS market was largely unregulated by government, more than 850 institutions in 56 countries that deal in derivatives and swaps belong to the ISDA (International Swaps and Derivatives Association). The ISDA members subscribe to a master agreement and several protocols/amendments, some of which require that in certain circumstances companies purchasing CDSs require counterparties (sellers) to post collateral to back their exposures.[22] The blurring of boundaries among banks, brokerage houses, and insurance agencies also made regulation and information gathering difficult. Regulation in the United States tends to be functional with separate government agencies regulating and overseeing banks, securities, insurance, and futures. There is no suprafinancial authority.

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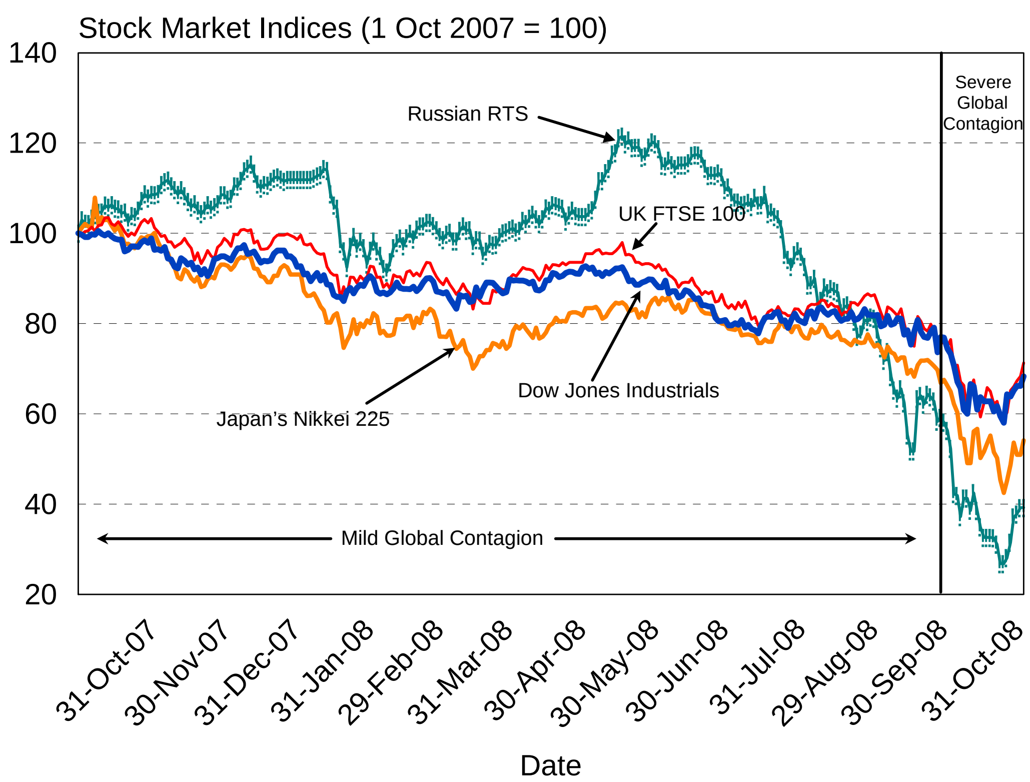
[22] For information on the International Swaps and Derivatives Association, see [http://www.isda.org]. In 2008, credit derivatives had collateralized exposure of 74%. See ISDA, *Margin Survey 2008*. Collateral calls have been a major factor in the financial difficulties of AIG insurance.

The Downward Slide

The plunge downward into the global financial crisis did not take long. It was triggered by the bursting of the housing bubble and the ensuing subprime mortgage crisis in the United States, but other conditions have contributed to the severity of the situation. Banks, investment houses, and consumers carried large amounts of leveraged debt. Certain countries incurred large deficits in international trade and current accounts (particularly the United States), while other countries accumulated large reserves of foreign exchange by running surpluses in those accounts. Investors deployed "hot money" in world markets seeking higher rates of return. These were joined by a huge run up in the price of commodities, rising interest rates to combat the threat of inflation, a general slowdown in world economic growth rates, and increased globalization that allowed for rapid communication, instant transfers of funds, and information networks that fed a herd instinct. This brought greater uncertainty and changed expectations into a world economy that for a half decade had been enjoying relative stability.

An immediate indicator of the rapidity and spread of the financial crisis has been in stock market values. As shown in **Figure 2**, as values on the U.S. market plunged, those in other countries were swept down in the undertow. By mid-October 2008, the stock indices for the United States, U.K., Japan, and Russia had fallen by half or more relative to their levels on October 1, 2007.

Figure 2. Selected Stock Market Indices for the United States, U.K., Japan, and Russia



Data Source: Factiva database.

Declines in stock market values reflected huge changes in expectations and the flight of capital from assets in countries deemed to have even small increases in risk. Many investors, who not too long ago had heeded financial advisors who were touting the long term returns from investing in the BRICs (Brazil, Russia, India, and China),[23] pulled their money out nearly as fast as they had put it in. Dramatic declines in stock values coincided with new accounting rules that required financial institutions holding stock as part of their capital base to value that stock according to market values (mark-to-market). Suddenly, the capital base of banks shrank and severely curtailed their ability to make more loans (counted as assets) and still remain within required capital-asset ratios. Insurance companies too found their capital reserves diminished right at the time they had to pay buyers of credit default swaps. The rescue (establishment of a conservatorship) for Fannie Mae and Freddie Mac in September 2008 potentially triggered credit default swap contracts with notional value exceeding $1.2 trillion.

In addition, the rising rate of defaults and bankruptcies created the prospect that equities would suddenly become valueless. The market price of stock in Freddie Mac plummeted from $63 on October 8, 2007 to $0.88 on October 28, 2008. Hedge funds, whose "rocket scientist" analysts claimed that they could make money whether markets rose or fell, lost vast sums of money. The prospect that even the most seemingly secure company could be bankrupt the next morning caused credit markets to freeze. Lending is based on trust and confidence. Trust and confidence evaporated as lenders reassessed lending practices and borrower risk.

One indicator of the trust among financial institutions is the Libor, the London Inter-Bank Offered Rate. This is the interest rate banks charge for short-term loans to each other. Although it is a composite of primarily European interest rates, it forms the the basis for many financial contracts world wide including U.S. home mortgages and student loans. During the worst of the financial crisis in October 2008, this rate had doubled from 2.5% to 5.1%, and for a few days much interbank lending actually had stopped. The rise in the Libor came at a time when the U.S. monetary authorities were lowering interest rates to stimulate lending. The difference between interest on Treasury bills (three month) and on the Libor (three month) is called the "Ted spread." This spread averaged 0.25 percentage points from 2002 to 2006, but in October 2008 exceeded 4.5 percentage points. The greater the spread, the greater the anxiety in the marketplace.[24]

Currency exchange rates serve both as a conduit of crisis conditions and an indicator of the severity of the crisis. As the financial crisis hit, investors fled stocks and debt instruments for the relative safety of cash — often held in the form of U.S. Treasury or other government securities. That increased demand for dollars, decreased the U.S. interest rate needed to attract investors, and caused a jump in inflows of liquid capital into the United States. For those countries deemed to be

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[23] Thomas M. Anderson, "Best Ways to Invest in BRICs," Kiplinger.com, October 18, 2007.

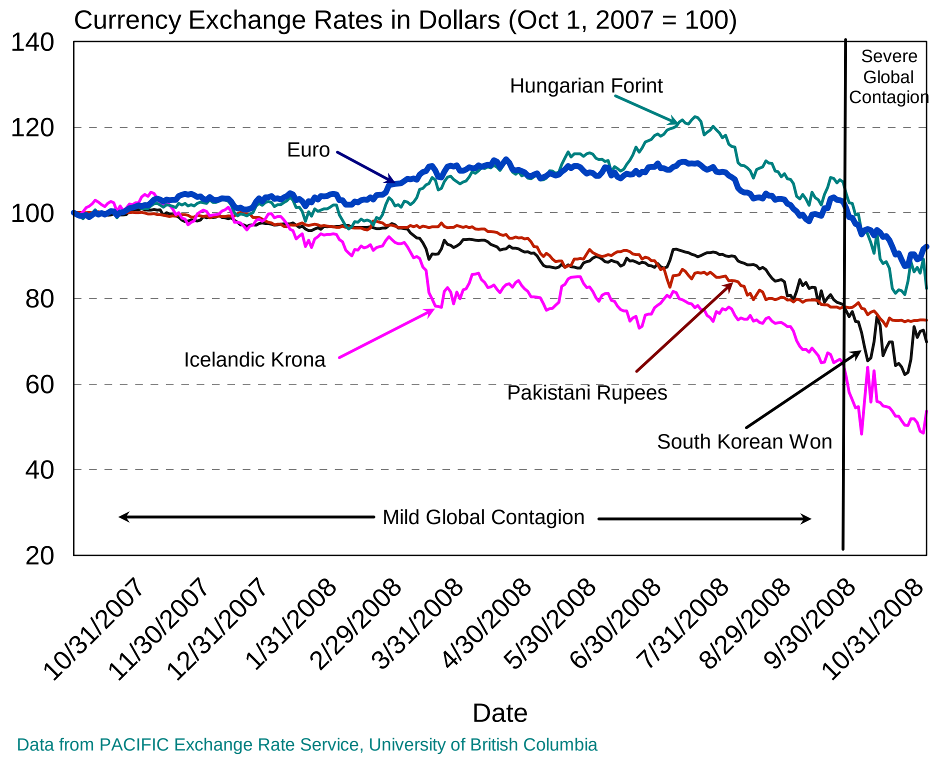
[24] For these and other indicators of the crisis in credit, see [http://www.nytimes.com/interactive/2008/10/08/business/economy/20081008-credit-chart-graphic.html].

vulnerable to the effects of the financial crisis, however, the effect was precisely the opposite. Demand for their currencies fell and their interest rates rose.

Figure 3 shows indexes of the value of selected currencies relative to the dollar for countries in which the effects of the financial crisis have been particularly severe. For much of 2007 and 2008, the Euro and other European currencies, including the Hungarian forint had been appreciating in value relative to the dollar. Then the crisis broke. Other currencies, such as the Korean won, Pakistani rupee, and Icelandic krona had been steadily weakening over the previous year and experienced sharp declines as the crisis evolved.

For a country in crisis, a weak currency increases the local currency equivalents of any debt denominated in dollars and exacerbates the difficulty of servicing that debt. The greater burden of debt servicing usually has combined with a weakening capital base of banks because of declines in stock market values to further add to the financial woes of countries. National governments have had little choice but to take fairly draconian measures to cope with the threat of financial collapse. As a last resort, some have turned to the International Monetary Fund for assistance.

Figure 3. Exchange Rate Values for Selected Currencies Relative to the U.S. Dollar



Data from PACIFIC Exchange Rate Service, University of British Columbia

Details of many of the actions by other countries to address the effects of the financial crisis are outlined in the sections below dealing with geographical regions and countries. **Table 1** provides a summary of costs of major actions taken so far by national governments.

Table 1. Selected Government Financial Support Actions
(in billions of U.S. dollars)

	Bank Guarantees	Injections Capital	Purchases of Assets	Other
United Kingdom	$450	$90		$349
United States	1,400	250	450	198
Austria	127	23		
Belgium		7	4	
France		62		400
Germany	600	190		
Greece	23	8		
Ireland	Banks' wholesale debt			
Netherlands	300	70		
Portugal	30			
Spain	150		75	
Norway			60	
Sweden	214			
Switzerland		5	60	
Canada	Banks' wholesale debt		26	
Denmark	Banks' wholesale debt			
Iceland	Nationalization of Glitner, Landsbanki, and Kaupthing Banks			
Australia	Banks' wholesale debt		7	
South Korea	100	1	1	
Total dollars	$5,269	711	1,357	1,357

Source: The Bank of England. *Financial Stability Report*, Oct 2008, p. 33.

Effects on Emerging Markets[25]

The global credit crunch that began in August 2007 has led to a financial crisis in emerging market countries (**see box**) that is being viewed as greater in both scope and effect than the East Asian financial crisis of 1997-98 or the Latin American debt crisis of 2001-2002, although the impact on individual countries may have been greater in previous crises. Of the emerging market countries, those in Central and Eastern Europe appear, to date, to be the most impacted by the financial crisis.

[25] Prepared by Martin A. Weiss, Specialist in International Trade and Finance, Foreign Affairs, Defense, and Trade Division.

What are Emerging Market Countries?

There is no uniform definition of the term "emerging markets." Originally conceived in the early 1980s, the term is used loosely to define a wide range of countries that have undergone rapid economic change over the past two decades. Broadly speaking, the term is used to distinguish these countries from the long-industrialized countries, on one hand, and less-developed countries (such as those in Sub-Saharan Africa), on the other. Emerging market countries are located primarily in Latin America, Central and Eastern Europe, and Asia.

Since 1999, the finance ministers of many of these emerging market countries began meeting with their peers from the industrialized countries under the aegis of the G-20, an informal forum to discuss policy issues related to global macroeconomic stability. The members of the G-20 are the European Union and 19 countries: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom and the United States.

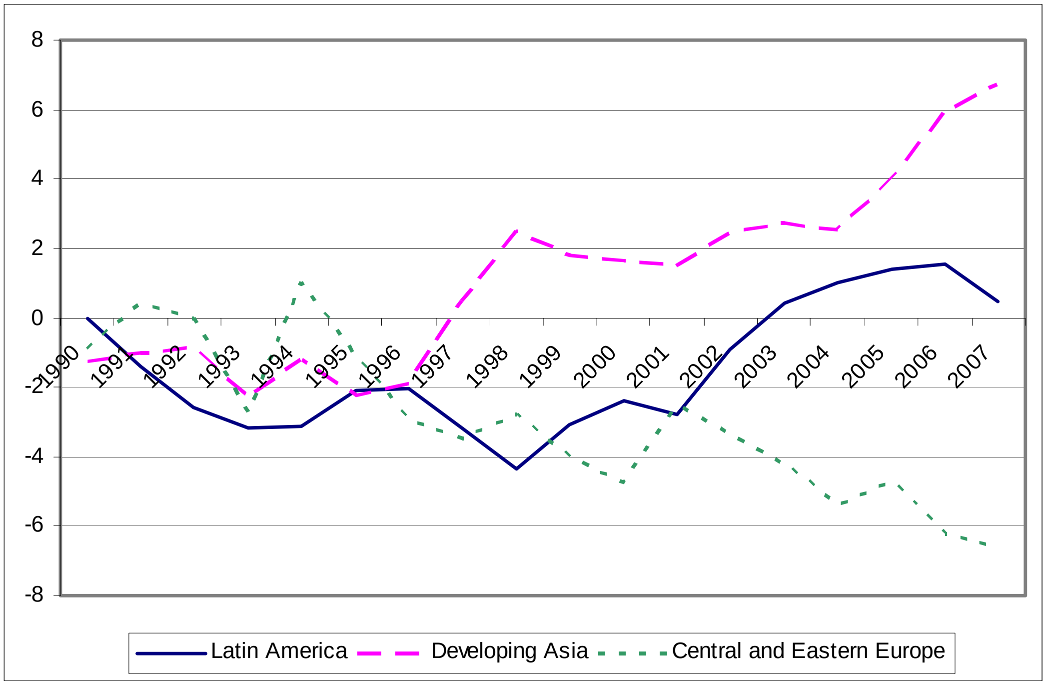
For more information, see: "When are Emerging Markets no Longer Emerging?, Knowledge@Wharton, available at [http://knowledge.wharton.upenn.edu/article.cfm?articleid=1911] .

The ability of emerging market countries to borrow from global capital markets has allowed many countries to experience incredibly high growth rates. For example, the Baltic countries of Latvia, Estonia, and Lithuania experienced annual economic growth of nearly 10% in recent years. However, since this economic expansion was predicated on the continued availability of access to foreign credit, they were highly vulnerable to a financial crisis when credit lines dried up.

Of all emerging market countries, Central and Eastern Europe appear to be the most vulnerable. On a wide variety of economic indicators, such as the total amount of debt in the economy, the size of current account deficits, dependence on foreign investment, and the level of indebtedness in the domestic banking sector, countries such as Hungary, Ukraine, Bulgaria, Kazakhstan, Kyrgyzstan, Latvia, Estonia, and Lithuania, rank among the highest of all emerging markets. Throughout the region, the average current account deficit increased from 2% of GDP in 2000 to 9% in 2008. In some countries, however, the current account deficit is much higher. Latvia's estimated 2008 current account deficit is 22.9% of GDP and Bulgaria's is 21.4%.[26] The average deficit for the region was greater than 6% in 2008 (**Figure 4**).

[26] Mark Scott, "Economic Problems Threaten Central and Eastern Europe," *BusinessWeek*, October 17, 2008.

Figure 4. Current Account Balances (as a percentage of GDP)



Source: International Monetary Fund

Due to the impact of the financial crisis, several Central and Eastern European countries have already sought emergency lending from the IMF to help finance their balance of payments. On October 24, the IMF announced an initial agreement on a $2.1 billion two-year loan with Iceland. On October 26, the IMF announced a $16.5 billion agreement with Ukraine. On October 28, the IMF announced a $15.7 billion package for Hungary. On November 3, a staff-level agreement on an IMF loan was reached with Kyrgyzstan.[27]

The quickness with which the crisis has impacted emerging market economies has taken many analysts by surprise. Since the Asian financial crisis, many Asian emerging market economies enacted a policy of foreign reserve accumulation as a form of self-insurance in case they once again faced a "sudden stop" of capital flows and the subsequent financial and balance of payments crises that result from a rapid tightening of international credit flows.[28] Two additional factors motivated emerging market reserve accumulation. First, several countries have pursued an export-led growth strategy targeted at the U.S. and other markets with which they have generated trade surpluses.[29] Second, a sharp rise in the price of commodities from 2004 to the first quarter of 2008 led many oil-exporting economies, and other

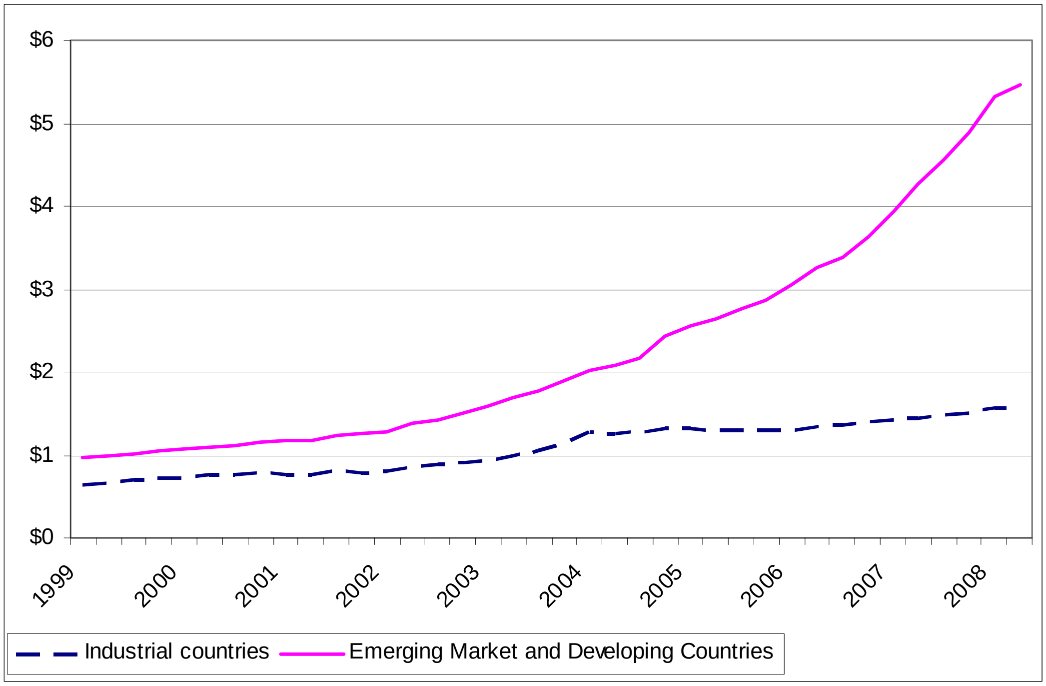
[27] Information on ongoing IMF negotiations is available at [http://www.imf.org].

[28] Reinhart, Carmen and Calvo, Guillermo (2000): When Capital Inflows Come to a Sudden Stop: Consequences and Policy Options. Published in: in Peter Kenen and Alexandre Swoboda, eds. Reforming the International Monetary and Financial System (Washington DC: International Monetary Fund, 2000) (2000): pp. 175-201.

[29] "New paradigm changes currency rules," *Oxford Analytica*, January 17, 2008.

commodity-based exporters, to report very large current account surpluses. **Figure 5** shows the rapid increase in foreign reserve accumulation among these countries. These reserves provided a sense of financial security to EM countries. Some countries, particularly China and certain oil exporters, also established sovereign wealth funds that invested the foreign exchange reserves in assets that promised higher yields.[30]

Figure 5. Global Foreign Exchange Reserves ($ Trillion)



Source: IMF

While global trade and finance linkages between the emerging markets and the industrialized countries have continued to deepen over the past decade, many analysts believed that emerging markets had successfully "decoupled" their growth prospects from those of industrialized countries. Proponents of the theory of decoupling argued that emerging market countries, especially in Eastern Europe and Asia, have successfully developed their own economies and intra-emerging market trade and finance to such an extent that a slowdown in the United States or Europe would not have as dramatic an impact as it did a decade ago. A report by two economists at the IMF found some evidence of this theory. The authors divided 105 countries into three groups: developed countries, emerging countries, and developing countries and studied how economic growth was correlated among the groups between 1960 and 2005. The authors found that while economic growth was highly synchronized between developed and developing countries, the impact of developed countries on

[30] See: CRS Report RL34336, *Sovereign Wealth Funds: Background and Policy Issues for Congress* by Martin A. Weiss.

emerging countries has decreased over time, especially during the past twenty years. According to the authors:

> In particular, [emerging market] countries have diversified their economies, attained high growth rates and increasingly become important players in the global economy. As a result, the nature of economic interactions between [industrialized and emerging market] countries has evolved from one of dependence to multidimensional interdependence.[31]

Despite efforts at self-insurance through reserve accumulation and evidence of economic decoupling, the U.S. financial crisis, and the sharp contraction of credit and global capital flows in October 2008 affected all emerging markets to a degree due to their continued dependence on foreign capital flows. According to the *Wall Street Journal*, in the month of October, Brazil, India, Mexico, and Russia drew down their reserves by more than $75 billion, in attempt to protect their currencies from depreciating further against a newly resurgent U.S. dollar.[32]

A key to understanding why emerging market countries have been so affected by the crisis (especially Central and Eastern Europe) is their high dependence on foreign capital flows to finance their economic growth **(Figures 6-8)**. Even though several emerging markets have been able to reduce net capital inflows by investing overseas (through sovereign wealth funds) or by tightening the conditions for foreign investment, the large amount of gross foreign capital flows into emerging markets remained a key vulnerability for them. For countries such as those in Central and Eastern Europe which have both high gross and net capital flows, vulnerability to financial crisis is even higher.

Once the crisis occurred, it became much more difficult for emerging market countries to continue to finance their foreign debt. According to Arvind Subramanian, an economist at the Peterson Institute for International Economics, and formerly an official at the IMF:

> If domestic banks or corporations fund themselves in foreign currency, they need to roll these over as the obligations related to gross flows fall due. In an environment of across-the-board deleveraging and flight to safety, rolling over is far from easy, and uncertainty about rolling over aggravates the loss in confidence.[33]

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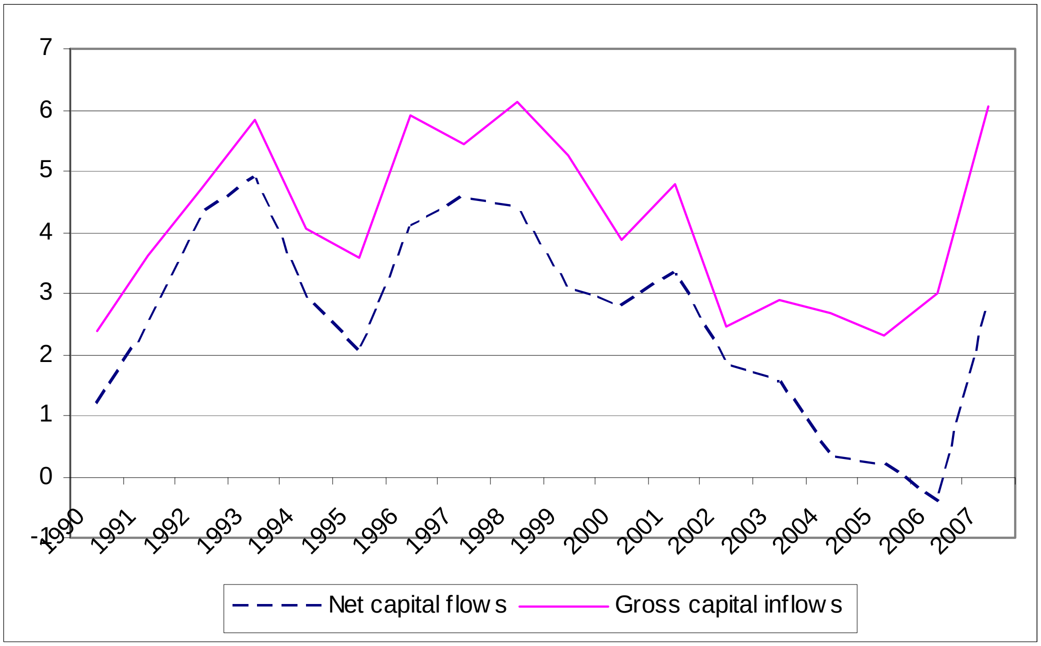
[31] Cigdem Akin and M. Ayhan Kose, "Changing Nature of North-South Linkages: Stylized Facts and Explanations." International Monetary Fund Working Paper 07/280. Available at: [http://www.imf.org/external/pubs/ft/wp/2007/wp07280.pdf].

[32] Joanna Slater and Jon Hilsenrath, "Currency-Price Swings Disrupt Global Markets ," *Wall Street Journal*, October 25, 2008.

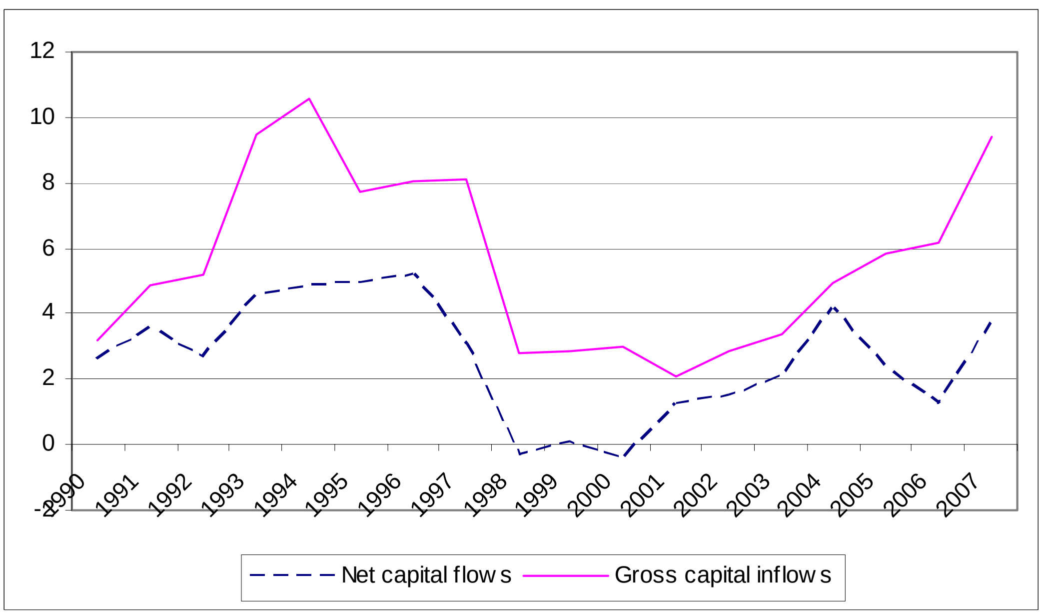
[33] Arvind Subramanian , "The Financial Crisis and Emerging Markets," Peterson Institute for International Economics, Realtime Economics Issue Watch, October 24, 2008.

Figure 6. Capital Flows to Latin America (in percent of GDP)



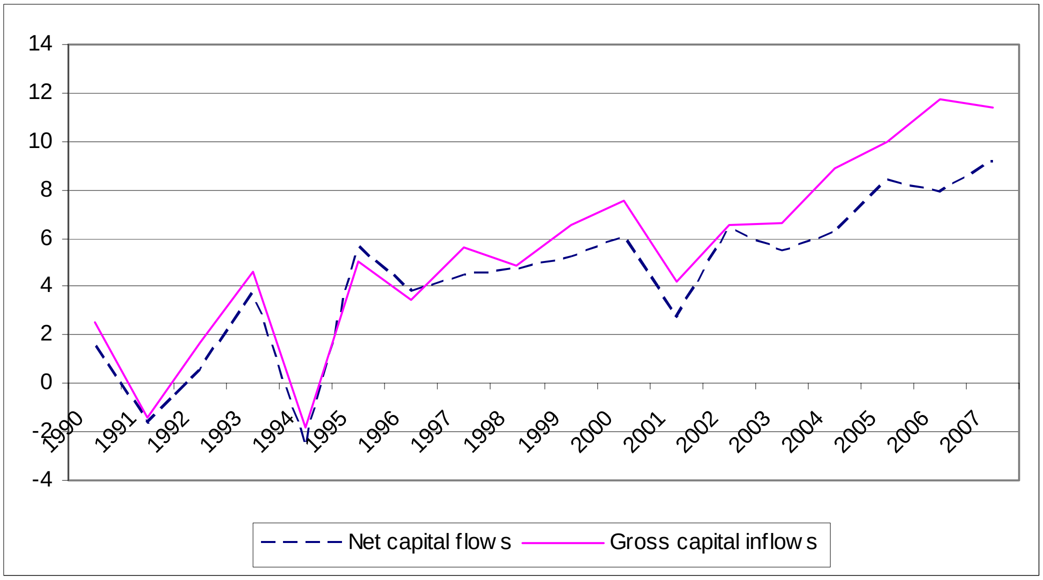
Source: IMF

Figure 7. Capital Flows to Developing Asia (in percent of GDP)



Source: IMF

Figure 8. Capital Flows to Central and Eastern Europe (in percent of GDP)



Source: IMF

As emerging markets have grown, Western financial institutions have increased their investments in emerging markets. G-10[34] financial institutions have a total of $4.7 trillion of exposure to emerging markets with $1.6 trillion to Central and Eastern Europe, $1.5 trillion to emerging Asia, and $1.0 trillion to Latin America. While industrialized nation bank debt to emerging markets represents a relatively small percentage (13%) of total cross-border bank lending ($36.9 trillion as of September 2008), this figure is disproportionately high for European financial institutions and their lending to Central and Eastern Europe. For European and U.K. banks, cross-border lending to emerging markets, primarily Central and Eastern Europe accounts for between 21% and 24% of total lending. For U.S. and Japanese institutions, the figures are closer to 4% and 5%.[35] The heavy debt to Western financial institutions greatly increased central and Eastern Europe's vulnerability to contagion from the financial crisis.

In addition to the immediate impact on growth from the cessation of available credit, a downturn in industrialized countries will likely affect emerging market countries through several other channels. As industrial economies contract, demand for emerging market exports will slow down. This will have an impact on a range of emerging and developing countries. For example, growth in larger economies such as China and India will likely slow as their exports decrease. At the same time, demand in China and India for raw natural resources (copper, oil, etc) from other

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[34] The Group of Ten is made up of eleven industrial countries (Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom, and the United States).

[35] Stephen Jen and Spyros Andreopoulos, "Europe More Exposed to EM Bank Debt than the U.S. or Japan," Morgan Stanley Research Global, October 23, 2008.

developing countries will also decrease, thus depressing growth in commodity-exporting countries.[36]

Slower economic growth in the industrialized countries may also impact less developed countries through lower future levels of bilateral foreign assistance. According to analysis by the Center for Global Development's David Roodman, foreign aid may drop precipitously over the next several years. His research finds that after the Nordic crisis of 1991, Norway's aid fell 10%, Sweden's 17%, and Finland's 62%. In Japan, foreign aid fell 44% between 1990 and 1996, and has never returned to pre-crisis assistance levels.[37]

Russia and the Financial Crisis[38]

Russia tends to be in a category by itself. Although by some measures, it is an emerging market, it also is highly industrialized. Until recently, Russia had been experiencing impressive economic success. In 2008, however, Russia has faced a triple threat with the financial crisis coinciding with a rapid decline in the price of oil and the aftermath of the country's military confrontation with Georgia over the break-away areas of South Ossetia and Abkhazia. These events have exposed three fundamental weaknesses in the Russian economy despite its success over the past decade: substantial dependence on oil and gas sales for export revenues and government revenues; rise in foreign and domestic investor concerns; and a weak banking system.

The decline in world oil prices has hit Russia hard. In 2007, oil, natural gas, and other fuels accounted for 65% of Russia's export revenues.[39] In addition, the Russian government is dependent on taxes on oil and gas sales for more than half of its revenues. Should the price of oil go below $60/barrel, the government budget would go into deficit.[40] Should the price drop to $30-$35/barrel, the Russian economy would stop growing, according to one estimate.[41]

Another sign of financial trouble for Russia has been the rapid decline in stock prices on Russian stock exchanges. (See **Figure 2**.) At the close of business on October 1, 2008, the RTS index had lost 69.0% of its value from its peak reached on

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[36] Dirk Willem te Velde, "The Global Financial Crisis and Developing Countries," *Overseas Development Institute*, October 2008.

[37] David Roodman, "History Says Financial Crisis Will Suppress Aid," *Center for Global Development*, October 13, 2008.

[38] Prepared by William H. Cooper, Specialist in International Trade and Finance, Foreign Affairs, Defense, and Trade Division.

[39] Economist Intelligence Unit.

[40] Open Source Center. *Government Bails Out Oil Companies Suffering From World Financial Crisis.* October 30, 2008.

[41] Economist Intelligence Unit. *Monthly Report — Russia.* October 2008. p. 7.

May 19, 2008.[42] (The decline was the largest since Russia experienced a financial crisis in August 1998.) On September 16 alone, the RTS index lost 11.5% of its value leading the government to close stock markets for two days. The overall drop in equity prices was blamed on the loss of investor confidence in the wake of the August 2008 conflict between Russia and Georgia but also because of the decline in oil prices and as a result of the credit crisis that has affected markets throughout the world. In addition, the ruble has been declining in nominal terms because foreign investors have been pulling capital out of the market to shore up domestic reserves putting downward pressure on the ruble.

Russia's banking system remains immature, and high interest rates prevail. Russian companies, therefore, have relied on foreign bank loans for financing rather than equity-based financing or domestic bank loans. However, these foreign loans were secured with company stocks as collateral. Because of the drop in stock values and because of the overall tightening of credit availability, foreign banks have declined to rollover loans.

The Russian government, led by President Medvedev and Prime Minister Putin, has implemented several packages of measures to prop up the stock market and the banks. The packages, valued at around $180 billion, are proportionally larger in terms of GDP than the U.S. package that Congress approved in September 2008.[43] In mid-September, the government made available $44 billion in funds to Russia's three largest state-owned banks to boost lending and another $16 billion to the next 25 largest banks. It also lowered taxes on oil exports to reduce costs to oil companies and made available $20 billion for the government to purchase equities on the stock market. In late September, the government announced that an additional $50 billion would be available to banks and Russian companies to pay off foreign debts coming due by the end of the year. On October 7, 2008, the government announced another package of $36.4 billion in credits to banks..[44]

Effects on Europe and The European Response[45]

Financial markets in the United States and Europe have become highly integrated as a result of cross-border investment by banks, securities brokers, and other financial firms. As a result of this integration, economic and financial developments that impact national economies are difficult to contain and are quickly transmitted across national borders, as attested to by the financial crisis of 2008. As financial firms react to a financial crisis in one area, their actions can spill over to other areas as they withdraw assets from foreign markets to shore up their domestic operations. Banks and financial firms in Europe have felt the repercussions of the

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[42] RTS.

[43] Ibid. 6-7.

[44] Economist Intelligence Unit. *Monthly Report — Russia.* October 2008. p. 6

[45] Prepared by James K. Jackson, Specialist in International Trade and Finance, Foreign Affairs, Defense, and Trade Division.

U.S. financial crisis as U.S. firms operating in Europe and as European firms operating in the United States have adjusted their operations in response to the crisis.

Within Europe, national governments and private firms have taken noticeably varied responses to the crisis, reflecting the unequal effects by country. While some have preferred to address the crisis on a case-by-case basis, others have looked for a systemic approach that could alter the drive within Europe toward greater economic integration. Great Britain has proposed a plan to rescue distressed banks by acquiring preferred stock temporarily. Iceland, on the other hand, has had to take over three of its largest banks in an effort to save its financial sector and its economy from collapse. The Icelandic experience raises important questions about how a nation can protect its depositors from financial crisis elsewhere and about the level of financial sector debt that is manageable without risking system-wide failure.

According to a recent report by the International Monetary Fund, many of the factors that led to the financial crisis in the United States are driving a similar crisis in Europe.[46] Essentially, the causes were low interest rates, growing complexity in mortgage securitization, and loosening in underwriting standards combined with expanded linkages between national financial centers that spurred a broad expansion in credit and economic growth. This rapid rate of growth pushed up the values of equities, commodities, and such tangible assets as real estate. As the combination of higher commodity higher prices, including the price of crude oil and housing, rose to historically high levels, consumer budgets were pinched, and consumers began to pare back on their expenditures. In July 2007, these factors combined to undermine the perceived value of a range of financial instruments and other assets and increased the perception of risk of financial instruments and the credit worthiness of a broad range of financial firms.

As creditworthiness problems in the United States began surfacing in the subprime mortgage market in July 2007, the risk perception in European credit markets followed. The financial turmoil quickly spread to Europe, although European mortgages initially remained unaffected by the collapse in mortgage prices in the United States. Another factor in the spread of the financial turmoil to Europe has been the linkages that have been formed between national credit markets and the role played by international investors who react to economic or financial shocks by rebalancing their portfolios in assets and markets that otherwise would seem to be unrelated. The rise in uncertainty and the drop in confidence that arose from this rebalancing action undermined the confidence in major European banks and disrupted the interbank market, with money center banks becoming unable to finance large securities portfolios in wholesale markets. The increased international linkages between financial institutions and the spread of complex financial instruments has meant that financial institutions in Europe and elsewhere have come to rely more on short-term liquidity lines, such as the interbank lending facility, for their day-to-day operations. This has made them especially vulnerable to any drawback in the interbank market.[47]

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[46] *Regional Economic Outlook: Europe*, International Monetary Fund, April, 2008, p. 19-20.

[47] Frank, Nathaniel, Brenda Gonzalez-Hermosillo, and Heiko Hesse, *Transmission of*
(continued...)

Recent IMF estimates indicate that economic growth in Europe is expected to slow sharply in 2009, while the threat of inflation is expected to lessen, as indicated in **Table 2**. Economic growth, as represented by the rate of increase in gross domestic product (GDP) for the Euro area countries is projected to fall to 1.4% in 2009 from 3.9% in 2007. Iceland, which has been particularly hard hit by the financial crisis, is expected to experience a negative rate of growth of -3.1% in 2009. These estimates may be a bit too pessimistic given the sharp drop in the price of oil and that of other commodities in September and October 2008, which likely would help to improve the rate of economic growth.

Table 2. Projections of Economic Growth in 2008 and 2009 and Price Inflation in Selected Regions and Countries (in percent)

	Real GDP Growth				CPI Inflation			
	2006	**2007**	**2008**	**2009**	**2006**	**2007**	**2008**	**2009**
	Actual		**Projected**		**Actual**		**Projected**	
United States	2.8	2	1.6	0.1	3.2	2.9	4.2	1.8
Europe	4.1	3.9	2.6	1.4	3.6	3.6	5.8	4.2
Advanced economies	3.0	2.8	1.3	0.2	2.2	2.1	3.5	2.2
Emerging economies	7.0	6.5	5.7	4.3	7.5	7.5	11.5	9.2
European Union	3.3	3.1	1.7	0.6	2.3	2.4	3.9	2.4
Euro Area	2.8	2.6	1.3	0.2	2.2	2.1	3.5	1.9
Austria	3.4	3.1	2	0.8	1.7	2.2	3.5	2.5
France	2.2	2.2	0.8	0.2	1.9	1.6	3.4	1.6
Germany	3.0	2.5	1.8	0	1.8	2.3	2.9	1.4
Italy	1.8	1.5	-0.1	-0.2	2.2	2.0	3.4	1.9
Netherlands	3.4	3.5	2.3	1.0	1.7	1.9	2.9	2.8
Spain	3.9	3.7	1.4	-0.2	3.6	2.8	4.5	2.6
Other EU								
Sweden	4.1	2.7	1.2	1.4	1.5	1.7	3.4	2.8
United Kingdom	2.8	3.0	1.0	-0.1	2.3	2.3	3.8	2.9
Non-EU Advanced								
Iceland	4.4	4.9	0.3	-3.1	6.8	5.0	12.1	11.2
Norway	2.5	3.7	2.5	1.2	2.3	0.8	3.2	2.7
Switzerland	3.4	3.3	1.7	0.7	1.0	0.7	2.6	1.5

Source: *World Economic Outlook*, the International Monetary Fund, October 2008, p. 6.

As **Table 3** indicates, the amount of losses that can be traced to the financial crisis varies across countries. Not all have been affected to the same degree. Mortgage markets vary starkly across Europe, depending on national laws and local mortgage practices. In addition, mortgage financing laws were relaxed in some markets, but not in all, to allow for refinancing of mortgages and to allow homeowners to withdraw equity to use for other purposes. Such laws were eased in

[47] (...continued)
Liquidity Shocks: Evidence From the 2007 Subprime Crisis, IMF Working Paper #WP/08/200, August 2008, the International Monetary Fund.

Great Britain and Ireland where the financial crisis has had an especially heavy cost. According to the Bank of England, the financial crisis has cost the British economy more than $200 billion in lost assets, compared with nearly $1.6 trillion in the United States. For the Euro area as a whole, the Bank of England estimated the losses to be at $1.1 trillion.

Table 3. Losses on Selected Financial assets
(in billions of U.S. dollars)

	Outstanding amounts	Losses as of April 2008	Losses as of October 2008
United Kingdom			
Prime residential mortgage-backed securities	$346.8	$14.7	$31.3
Non-conforming residential mortgage-backed securities	70.1	3.9	13.8
Commercial mortgage-backed securities	59.3	5.5	7.9
Investment-grade corporate bonds	808.6	83.0	155.4
High-yield corporate bonds	26.9	5.3	11.8
Total		112.7	220.3
United States			
Home equity loan asset-backed securities (ABS)(c)	$757.0	$255.0	$309.9
Home equity loan ABS collateralised debt obligations (CDOs)(c)(d)	421.0	236.0	277.0
Commercial mortgage-backed securities	700.0	79.8	97.2
Collateralised loan obligations	340.0	12.2	46.2
Investment-grade corporate bonds	3,308.0	79.7	600.1
High-yield corporate bonds	692.0	76	246.8
Total		738.8	1,577.0
Euro area			
Residential mortgage-backed securities(e)	$553.4	$30.7	$55.6
Commercial mortgage-backed securities(e)	48.6	4.0	5.9
Collateralised loan obligations	147.3	9.7	32.6
Investment-grade corporate bonds	7613.3	405.8	919.3
High-yield corporate bonds	250.3	41.6	108.5
Total		492.1	1,122.0

Source: *Financial Stability Report*, October 2008, Bank of England, p. 14.
Note: Losses estimated as of mid-October 2008. $1.43 dollars per euro; 1.797 pounds per dollar.

Central banks in the United States, the Euro zone, the United Kingdom, Canada, Sweden, and Switzerland staged a coordinated cut in interest rates on October 8, 2008, and announced they had agreed on a plan of action to address the ever-widening financial crisis.[48] The actions, however, did little to stem the wide-spread

[48] Hilsenrath, Jon, Joellen Perry, and Sudeep Reddy, Central Banks Launch Coordinated Attack; Emergency Rate Cuts Fail to Halt stock Slide; U.S. Treasury Considers Buying Stakes in Banks as Direct Move to Shore Up Capital, the *Wall Street Journal*, October 8,
(continued...)

concerns that were driving financial markets. Many Europeans were surprised at the speed with which the financial crisis spread across national borders and the extent to which it threatened to weaken economic growth in Europe. This crisis did not just involve U.S. institutions. It has demonstrated the global economic and financial linkages that tie national economies together in a way that may not have been imagined even a decade ago. At the time, much of the substance of the European plan was provided by the British Prime Minister Gordon Brown,[49] who announced a plan to provide guarantees and capital to shore up banks. Eventually, the basic approach devised by the British arguably would influence actions taken by other governments, including that of the United States.

On October 10, 2008, the G-7 finance ministers and central bankers,[50] met in Washington, DC, to provide a more coordinated approach to the crisis. At the Euro area summit on October 12, 2008, Euro area countries along with the United Kingdom urged all European governments to adopt a common set of principles to address the financial crisis.[51] The measures the nations supported are largely in line with those adopted by the U.K. and include:

- Recapitalization: governments promised to provide funds to banks that might be struggling to raise capital and pledged to pursue wide-ranging restructuring of the leadership of those banks that are turning to the government for capital.

- State ownership: governments indicated that they will buy shares in the banks that are seeking recapitalization.

- Government debt guarantees: guarantees offered for any new debts, including inter-bank loans, issued by the banks in the Euro zone area.

- Improved regulations: the governments agreed to encourage regulations to permit assets to be valued on their risk of default instead of their current market price.

In addition to these measures, on October 16, 2008, European Union leaders agreed to set up a crisis unit and to hold a monthly meeting to improve financial oversight.[52] Josse Manuel Durao Barroso, President of the European Commission,

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[48] (...continued)
2008, p. A1.

[49] Castle, Stephen, British Leader Wants Overhaul of Financial System, *The New York Times*, October 16, 2008.

[50] The G-7 consists of Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States.

[51] *Summit of the Euro Area Countries: Declaration on a Concerted European Action Plan of the Euro Area Countries*, European union, October 12, 2008.

[52] EU Sets up Crisis Unit to Boost Financial Oversight, *Thompson Financial News*, October
(continued...)

urged the EU members to develop a "fully integrated solution" to address the global financial crisis. While continuing to rely on the current method that has each EU country develop and implement its own national regulations regarding supervision over financial institutions, the European Council stressed the need to strengthen the EU-wide supervision of the European financial sector. The EU statement urged the development of a "coordinated supervision system at the European level."[53]

European leaders, meeting prior to the November 15, 2008 G-20 economic summit in Washington, DC, agreed that the task of preventing future financial crisis should fall to the International Monetary Fund, but they could not agree on precisely what that role should be.[54] The leaders set a 100-day deadline to draw up reforms for the international financial system. British Prime Minister Gordon Brown reportedly urged other European leaders to back fiscal stimulus measure to support the November 6, 2008 interest rate cuts by the European Central Bank, the Bank of England, and other central banks. Reportedly, French Prime Minister Nicolas Sarkozy argued that the role of the IMF and the World Bank needed to be rethought. French and German officials have argued that the IMF should assume a larger role in financial market regulation, acting as a global supervisor of regulators. Prime Minister Sarkozy also argued that the IMF should "assess" the work of such international bodies as the Bank of International Settlements. Other G-20 leaders, however, reportedly have disagreed with this proposal, agreeing instead to make the IMF "the pivot of a renewed international system," working alongside other bodies. Other Ministers also were apparently not enthusiastic toward a French proposal that Europe should agree to a more formalized coordination of economic policy.

Appendix B outlines the main operations the Bank of England, U.S. Federal Reserve, and the European Central Bank have taken to address the financial crisis. Several agreements between the U.S. Federal Reserve and the European Central Bank have expanded, and these three banking institutions have announced joint lending operations and other measures to increase the availability of dollar funding.[55]

Other national governments have acted to stem the financial crisis and to protect their national economies. For instance, Germany was the first to implement a comprehensive rescue package, which could cost up to $750 billion. The German package provided $600 billion in bank guarantees and as much as $150 billion in state funds. Of the money being offered in state funds, $120 billion was to be available for recapitalization, while $30 billion was to be a provision for the bank guarantees.

France, which has been leading efforts to develop a coordinated European response to the financial crisis, offered a package of measures that is expected to cost

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[52] (...continued)
16, 2008.

[53] Ibid.

[54] Hall, Ben, George Parker, and Nikki Tait, European Leaders Decide on Deadline for Reform Blueprint, *Financial Times*, November 8, 2008, p. 7.

[55] The Bank of England. *Financial Stability Report*, October 2008, p. 18.

over $500 billion. The French government is creating two state agencies that will provide funds to where they are needed. One entity is to issue up to $480 billion in guarantees on inter-bank lending issued before December 31, 2009, and valid for five years. The other entity is to use a $60 billion fund to recapitalize struggling companies by allowing the government to buy equity stakes.

Italy has not created a fund for its rescue plan, but the Italian government has announced a package of measures, including Treasury guarantees for new bonds issued by banks until December 31, 2009, and valid for five years. The guarantees are to be supplied at market prices and require the approval of the Bank of Italy.

The "European Framework for Action"

On October 29, 2008, the European Commission released a "European Framework for Action" as a way to coordinate the actions of the 27 member states of the European Union to address the financial crisis.[56] The EU also announced that on November 16, 2008, the Commission will propose a more detailed plan that will bring together short-term goals to address the current economic downturn with the longer-term goals on growth and jobs in the Lisbon Strategy.[57] The short-term plan revolves around a three-part approach to an overall EU recovery action plan/framework. The three parts to the EU framework are:

> **A new financial market architecture at the EU level**. The basis of this architecture involves implementing measures that member states have announced as well as providing for (1) continued support for the financial system from the European Central Bank and other central banks; (2) rapid and consistent implementation of the bank rescue plan that has been established by the member states; and (3) decisive measures that are designed to contain the crisis from spreading to all of the member states.
>
> **Dealing with the impact on the real economy**. The policy instruments member states can use to address the expected rise in unemployment and decline in economic growth as a second-round effect of the financial crisis are in the hands of the individual member states. The EU can assist by adding short-term actions to its structural reform agenda, while investing in the future through: (1) increasing investment in R&D innovation and education; (2) promoting flexicurity[58] to protect and equip people rather than specific jobs; (3) freeing up businesses to build markets at home and internationally; and (4) enhancing competitiveness by promoting green technology, overcoming energy security constraints, and achieving environmental goals. In addition, the Commission will explore a wide range of ways in which EU members can increase their rate of economic growth.

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[56] Communication From the Commission, From Financial Crisis to Recovery: A European Framework for Action, European Commission, October 29, 2008.

[57] The Lisbon Strategy was adopted by the EU member states at the Lisbon summit of the European Union in March 2001 and then recast in 2005 based on a consensus among EU member states to promote long-term economic growth and development in Europe.

[58] The combination of labor market flexibility and security for workers.

A global response to the financial crisis. The financial crisis has demonstrated the growing interaction between the financial sector and the goods-and services-producing sectors of economies. As a result, the crisis has raised questions concerning global governance not only relative to the financial sector, but the need to maintain open trade markets. The EU would like to use the November 15, 2008 multi-nation G-20 economic summit in Washington, DC, to promote a series of measures to reform the global financial architecture. The Commission argues that the measures should include (1) strengthening international regulatory standards; (2) strengthen international coordination among financial supervisors; (3) strengthening measures to monitor and coordinate macroeconomic policies; and (4) developing the capacity to address financial crises at the national regional and multilateral levels. Also, a financial architecture plan should include three key principles: (1) efficiency; (2) transparency and accountability; and (3) the inclusion of representation of key emerging economies.

Within Europe, the British have been especially active in developing a plan to address the credit market aspects of the crisis. The plan promoted by British Prime Minister Gordon Brown involves having the central government acquire preferred shares in distressed banks for a specified amount of time, rather than acquiring the non-performing loans of the banks. This approach is being followed in some cases by other countries.

The British Rescue Plan

On October 8, 2008, the British Government announced a $850 billion multi-part plan to rescue its banking sector from the current financial crisis. Details of this plan are presented here to illustrate the varied nature of the plan. The Stability and Reconstruction Plan followed a day when British banks lost £17 billion on the London Stock Exchange. The biggest loser was the Royal Bank of Scotland, whose shares fell 39%, or £10 billion, of its value. In the downturn, other British banks lost substantial amounts of their value, including the Halifax Bank of Scotland which was in the process of being acquired by Lloyds TSB.

The British plan included four parts:

- A coordinated cut in key interest rates of 50 basis, or one-half of one percent (0.5) between the Bank of England, the Federal Reserve, and the European Central Bank.

- An announcement of an investment facility of $87 billion implemented in two stages to acquire the Tier 1 capital, or preferred stock, in “eligible” banks and building societies (financial institutions that specialize on mortgage financing) in order to recapitalize the firms. To qualify for the recapitalization plan, an institution must be incorporated in the UK (including UK subsidiaries of foreign institutions, which have a substantial business in the UK and building societies). Tier 1 capital often is used as measure of the asset strength of a financial institution.

- The British Government agreed to make available to those institutions participating in the recapitalization scheme up to $436 billion in guarantees on new short- and medium-term debt to assist in refinancing maturing funding obligations as they fall due for terms up to three years.

- The British Government announced that it would make available $352 billion through the Special Liquidity Scheme to improve liquidity in the banking industry. The Special Liquidity Scheme was launched by the Bank of England on April 21, 2008 to allow banks to temporarily swap their high-quality mortgage-backed and other securities for UK Treasury bills.[59]

In addition to this four-part plan, the Bank of England announced on October 16, 2008, that it had developed three new proposals for its money market operations. First, the establishment of operational standing facilities to address technical problems and imbalances in the operation of money markets and payments facilities but not provide financial support. Second, the establishment of a discount window facility which will allow banks to borrow government bonds or, at the Bank's discretion, cash, against a wide range of eligible collateral to provide liquidity insurance to commercial in stress. Third, a permanent open market for long-term repurchase agreements (securities sold for cash with an agreement to repurchase the securities at a specified time) against broader classes of collateral to offer banks additional tools for managing their liquidity.[60]

The British plan was quickly implemented with the UK government taking a controlling interest in the Royal Bank of Scotland (RBS) and Hallifax Bank of Scotland. The move was prompted by news that RBS was seeking £20 billion from the British government effectively giving the government a controlling 60% stake in the bank, with £5 billion issued in preferred shares and £15 billion underwritten by the government. The amount of capital that was raised was almost twice the market value of RBS, which had lost 61% of its stock value by October 10, 2008. In addition, market observers were speculating that HBOS was planning to ask the government for £12 billion to facilitate the merger between HBOS and Lloyds TSB.

Collapse of Iceland's Banking Sector

The failure of Iceland's banks raises questions of bank supervision and crisis management for governments in Europe and the United States. As Icelandic banks began to default, Britain used an anti-terrorism law to seize the deposits of the banks to prevent the banks from shifting funds from Britain to Iceland.[61] This incident raises questions about how national governments should address the issue of supervising foreign financial firms operating within their borders and whether they

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[59] The Bank of England, *Financial Stability Report*, April 2008, p. 10.

[60] Ibid., p. 31.

[61] Benoit, Bertrand, Tom Braithwaaite, Jimmy Burns, Jean Eaglesham, et. al., Iceland and UK clash on Crisis, *Financial Times*, October 10, 2008, p. 1.

can prevent foreign-owned firms from withdrawing deposits in one market to offset losses in another. In addition, the case of Iceland raises questions about the cost and benefits of branch banking across national borders where banks can grow to be so large that disruptions in the financial market can cause defaults that outstrip the resources of national central banks to address.

On October 24, 2008, Iceland[62] and the International Monetary Fund (IMF) announced they had reached an initial agreement on a $2.1 billion two-year loan to finance trade and to help rescue Iceland's major banks.[63] The amount was about one-third of the $6 billion that Iceland had originally requested. As part of the agreement, Iceland has proposed a plan to restore confidence in its banking system, stabilize the exchange rate, and improve the nation's fiscal position. As part of that plan, Iceland's central bank raised its key interest rate by 6 percentage points to 18% on October 29, 2008, to attract foreign investors and to shore up its sagging currency.[64] The IMF loan needs approval of the IMF's Executive Board. Immediately after the Executive Board's approval, Iceland would be able to draw $833 million. So far, Iceland's three major banks have collapsed, and Iceland has experienced a major devaluation of its currency, the krona. A separate rescue package may include assistance from Norway, Sweden, Denmark, and Japan. Still pending is a $5.5 billion loan that Iceland is hoping to get from Russia.

Between October 7 and 9, 2008, Iceland's Financial Supervisory Authority (FSA), an independent state authority with responsibilities to regulate and supervise Iceland's credit, insurance, securities, and pension markets took control, without actually nationalizing them, of three of Iceland's largest banks: Landsbanki, Glitnir Banki, and Kaupthing Bank prior to a scheduled vote by shareholders to accept a government plan to purchase the shares of the banks in order to head off the collapse of the banks. At the same time, Iceland suspended trading on its stock exchange for two days.[65] In part, the takeover also attempted to quell a sharp depreciation in the exchange value of the Icelandic krona.

The demise of Iceland's three largest banks is attributed to an array of events, but primarily stems from decisions by the banks themselves. Some observers argued that the collapse of Lehman Brothers set in motion the events that finally led to the collapse of the banks,[66] but this conclusion seems to be highly suspect. By the time of the acknowledged start of the global financial crisis in mid-2007, Iceland's central bank and Iceland's banks themselves had begun to recognize how vulnerable the

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[62] This section relies heavily on, *The Economy of Iceland, 2008*, a publication of the Central Bank of Iceland.

[63] *IMF and Iceland Outline $2.1 Billion Loan Plan*, International Monetary Fund, October 24, 2008.

[64] Iceland Raises Key Rate by 6 Percentage Points, *The New York Times*, October 29, 2008.

[65] Wardell, Jane, Iceland's Financial Crisis Escalates, BusinessWeek, October 9, 2008; Pfanner, Eric, Meltdown of Iceland's Financial system Quickens, *The New York Times*, October 9, 2008.

[66] Portes, Richard, The Shocking Errors Behind Iceland's Meltdown, *Financial Times*, October 13, 2008, p. 15.

banks had become. In particular, officials in Iceland as well as financial observers in Europe had begun to reassess the risks associated with various financial instruments, and to raise questions about the asset strength of the banks and the asset size of the banks relative to the size of Iceland's economy. In addition, by late 2007 various organization had begun to recognize the imbalances that were becoming apparent in Iceland's economy and had forecast a slowdown in Iceland's torrid pace of economic growth for 2008 and 2009.

On October 15, 2008, the Central Bank of Iceland set up a temporary system of daily currency auctions to facilitate international trade. Attempts by Iceland's central bank to support the value of the krona are at the heart of Iceland's problems. Without a viable currency, there was no way to support the banks, which have done the bulk of their business in foreign markets. The financial crisis has also created problems with Great Britain because hundreds of thousands of Britons hold accounts in online branches of the Icelandic banks, and they fear those accounts will default. The government of British Prime minister Gordon Brown has used powers granted under anti-terrorism laws to freeze British assets of Landsbanki until the situation is resolved.

Impact on Asia and the Asian Response[67]

Many Asian economies have been through wrenching financial crises in the past 10-15 years. Although most observers say the region's economic fundamentals have improved greatly in the past decade, this crisis provides a worrying sense of *deja vu*, and an illustration that Asian policy changes in recent years — including Japan's slow but comprehensive banking reforms, Korea's opening of its financial markets, China's dramatic economic transformation, and the enormous buildup of sovereign reserves across the region — have not fully insulated (and, so far, *cannot* fully insulate) Asian economies from global contagion.

To date, Asia has not suffered a large-scale bankruptcy or had to come to the rescue of a major financial institution. With only a few exceptions — most notably in South Korea — leverage within Asian financial systems is comparatively low, and bank balance sheets were comparatively healthy at the outset of the crisis. Nearly all East Asian nations run current account surpluses, a reversal from their state during the Asian financial crisis of the late 1990s. These surpluses have been one reason for the buildup of enormous government reserves in the region, including China's $1.9 trillion and Japan's $996 billion — the two largest reserve stockpiles in the world. Such reserves give Asian governments resources to provide fiscal stimulus, inject capital into their financial systems, and provide backstop guarantees for private financial transactions where needed. So overall, Asian economies are much healthier than they were before the Asian Financial Crisis of 1997-1998, when several Asian countries burned through their limited reserves quickly trying to defend currencies from speculative selling.

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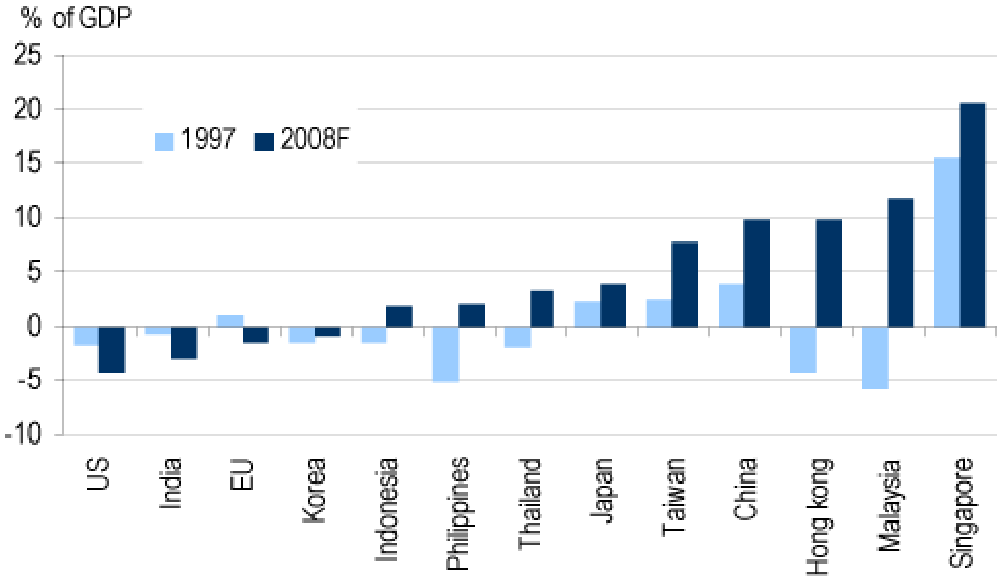
[67] Prepared by Ben Dolven, Asia Section Research Manager, Foreign Affairs, Defense, and Trade Division.

Figure 9. Asian Current Account Balances are Mostly Healthy



Source: Merrill Lynch

Still, Asia has not been insulated. The initial stage of the crisis, which centered around losses directly from subprime assets in the United States, has given way to a broader global crisis marked by slowing economies and dried-up liquidity. Asia and the United States are deeply linked in many ways, including trade (primarily Asian exports to the United States), U.S. investments in the region, and financial linkages that entwine Asian banks, companies and governments with U.S. markets and financial institutions. As a result, even though Asian banks disclosed relatively low direct exposures to failed institutions and toxic assets in the United States and Europe, Asian economies appear caught in a second phase of the crisis. With Western economies slowing and global investors short of cash and pulling back from any markets deemed risky, Asian economies appear extremely vulnerable — and that threatens deeper damage to Asian financial systems and then, in turn, to markets for U.S. exports and investments.

The signs of distress in Asia are legion. Japan's Nikkei-225 Index has lost half its value over the course of 2008, exacerbated by a surge by the yen to its highest level against the dollar since 1982. The yen's strength (which analysts say is largely the result of international investors forced to buy yen to square trading positions that had taken advantage of low Japanese interest rates[68]) makes Japanese exports more expensive and adds to the damage that slowing economies around the world are already expected to inflict on Japan's export-led economy. Meanwhile, South Korea's stock market and currency have plunged precipitously, as South Korean companies have hoarded dollars because of substantial dollar debts. Chinese GDP growth, while still strong, slowed from 10.4% in the April-June quarter to 9.0% in the July-September period, raising concerns that further slowing could raise

[68] Crisis Deals New Blow to Japan, *The Wall Street Journal*, October 28, 2008.

unemployment and force the government into aggressive stimulus measures. Smaller economies dependent on the financial and trading sectors, such as Hong Kong and Singapore, have been hammered — Singapore is already in a recession, and Hong Kong's government has announced it will guarantee all the $773 billion in Hong Kong bank deposits through 2010.

One of the most worrying developments in Asia is that Pakistan, already coping with severe political instability, has been forced because of dwindling government reserves into discussions with the International Monetary Fund, which reportedly will offer the country loans estimated around $12 billion-$15 billion to help it avoid default.[69] This points to the limits of bilateral solutions to the crisis: Pakistan reportedly sought support from China, Saudi Arabia and other Middle Eastern states before being forced to the IMF.[70]

Throughout October, governments in Japan, South Korea, Hong Kong, Singapore, Malaysia, Australia, New Zealand, Indonesia and elsewhere have been forced into a range of moves to support domestic financial systems, pumping money into financial markets, issuing guarantees for bank deposits, and providing fiscal stimulus to keep growth strong and slow declines in local stock markets. In several instances, including in Japan and South Korea, initial interventions failed to staunch financial market declines, leading authorities to broaden their support moves as the crisis deepened.

So in Asia, a belief that held sway in recent years that Asian economies were starting to "decouple" from the United States and Europe, generating growth that didn't depend on the rest of the world, has given way to a realization that a crisis that originated in the West can sweep up the region as well. Declines in Asian stock markets are similar in scale to, or larger than, those in the U.S. and Europe, despite the lack of bankruptcies and failed institutions in Asia. Throughout October, Asian economies have experienced a so-called "flight to quality," in which lenders and investors have sought safe investments and moved out of those perceived as risky. This has so far included the majority of Asia's emerging economies. Some economists, however, believe that Asia's reserves and current account surpluses may recover more strongly than other emerging markets once the crisis stabilizes.[71]

Asian Reserves and Their Impact

Some analysts argue that substantial Asian reserves could be one source of relief for the global economy.[72] Japan has contributed funding for the IMF support package of Iceland, and in early October Japanese Finance Minister Shoichi Nakagawa

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[69] IMF 'Has Six Days to Save Pakistan,' *Financial Times*, October 28, 2008.

[70] Despite Ambivalence, Pakistan May Wrap Deal by Next Week, *The Wall Street Journal*, October 28, 2008.

[71] See, for instance, Morgan Stanley report, "EM Currencies, No Differentiation in the Sell-Off," October 23, 2008.

[72] See, for instance, Jeffrey Sachs, The Best Recipe for Avoiding a Global Recession, *Financial Times*, October 27, 2008.

offered to do the same for other packages.[73] Many wonder if China and other reserve-rich developing nations will find ways to use those reserves to support financially-strapped governments. As noted previously, Pakistan reportedly has approached China and several Gulf states for such support — in both cases unsuccessfully.

One key question is whether Asian countries will seek to play a larger role in setting multilateral moves to shore up regulation, and international support for troubled countries. Previous Asian attempts to play a leadership role have been unsuccessful. In 1998, in the midst of the Asian Financial Crisis, Japan and the Asian Development Bank proposed the creation of an "Asian Monetary Fund" through which wealthier Asian governments could support economies in financial distress. The proposal was successfully opposed by the U.S. Treasury Department, which argued that it could be a way for countries to bypass the conditions that the IMF demands of its borrowers and go straight to "easier" sources of credit.

Two years later, in 2000, Finance Ministers from the ASEAN+3 nations (the 10 members of the Association of Southeast Asian Nations[74], plus Japan, South Korea and China) announced the Chiang Mai Initiative (CMI), whose primary measure was to provide a swap mechanism that countries could tap to cover shortfalls of foreign reserves. This was a less aggressive proposal than the Asian Monetary Fund. Although a small portion of the swap lines could be tapped in an emergency, most could go through the IMF.[75] On October 26, Japan, China, South Korea, and ASEAN members agreed to start an $80 billion multilateral swap arrangement in 2009, which would allow countries with substantial balance of payments problems to tap the reserves of larger economies.

Asian leaders have sought to start other regional discussions. On October 22, a Japanese government official floated the idea of a pan-Asian financial stability forum, modeled after the Financial Stability Forum at the BIS, which was discussed in May at a meeting of Finance Ministers from Japan, South Korea and China.[76] This followed a call from South Korean President Lee Myung-bak for another trilateral meeting between the three countries' finance ministers to brainstorm on regional responses to the crisis.[77] At an October 25-26 meeting of the Asia Europe Forum (ASEM), Chinese Premier Wen Jiabao said China will attend the G-20 "Bretton Woods II" conference on Nov 15, 2008, and that it generally agrees with many European governments which seek an expansion of multilateral regulations. "We

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[73] Japan Offers Foreign Reserves to Support IMF Lending, *Bloomberg*, October 12, 2008.

[74] ASEAN's members are Indonesia, Singapore, Malaysia, Thailand, the Philippines, Brunei, Vietnam, Cambodia, Laos and Burma (Myanmar).

[75] For a fuller discussion of the Chiang Mai Initiative, see East Asian Cooperation, Institute of International Economics, [http://www.iie.com/publications/chapters_preview/345/3iie3381.pdf].

[76] Japan, China, S.Korea Eye Financial Stability Forum, *Reuters*, October 20, 2008.

[77] ROK President Proposes Finance Minster Talks With China., Japan Amid Market Turmoil, *Yonhap News Agency*, October 3, 2008.

need financial innovation, but we need financial oversight even more," Wen reportedly told a press conference.[78]

National Responses

So far, the national-level responses among Asian governments include the following:

Japan. Japan was part of the early moves among major economies to flood markets with liquidity, in the "crisis containment" part of the global response. Alongside other major central banks, the Bank of Japan pumped tens of billions of dollars into financial markets in late September and early October. It followed these moves with an announcement on October 14 that it would offer an unlimited amount of dollars to institutions operating in Japan, to ensure that Japanese interbank credit markets continued to function. The BOJ did not lower interest rates in the crisis's early stages, but on October 31, it joined other global central banks, including the U.S. Federal Reserve, by cutting a key short-term interest rate to 0.3%, from 0.5%.

For a time, Japan was considered relatively insulated, because of its well capitalized banks, substantial reserves and current account surplus. Japan spent nearly $440 billion between 1998 and 2003 to assist and recapitalize its banking system, and most observers say Japan's financial system emerged from the experience fairly sound. Healthy capital positions helped Mitsubishi UFG Group, Japan's largest bank, and Nomura, the country's largest brokerage, to buy pieces of distressed U.S. investment banks as the crisis was deepening in October. Mitsubishi UFG bought 21% of Morgan Stanley for $9 billion, and Nomura purchased the Asian, European and Middle Eastern operations of Lehman Brothers.

But as Western economies began to slow, Japan's financial insulation thinned. The Japanese economy is highly exposed to slowdowns in export markets, particularly in the U.S. and Europe. The U.S. accounted for 20.1% of Japan's exports in 2007. Japan has sought to provide fiscal stimulus: The government unveiled a $107 billion stimulus package in August, and on October 31, Prime Minister Taro Aso announced a second set of stimulus measures, valued at another $51.5 billion.

There have been signs of stress in the Japanese financial system in the weeks following the Nomura and Mitsubishi UFG purchases. In October, Yamato Insurance, a mid-sized insurance company, filed for bankruptcy, with $2.7 billion in liabilities. Then, in late October, with share prices tumbling, the much larger Mitsubishi UFG Group — which just two weeks earlier was sufficiently capitalized that it had bought the Morgan Stanley stake — said it would raise as much as $10.7 billion to improve its capital base. Many analysts say smaller banks may need direct help from the government. Japan's two largest political parties, the ruling Liberal Democratic Party and the main opposition Democratic Party of Japan, have agreed on the need to re-authorize expired legislation that would allow the government to

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[78] Leaders of Europe and Asia Call for Joint Economic Action, *New York Times,* October 25, 2008.

purchase equity to support private banks, and Japanese media reports say this is expected to be passed in December. This move would restart a program first authorized in 2002 as part of the bank recapitalization process.

China.[79] The extent of China's exposure to the current global financial crisis, in particular from the fallout of the U.S. sub-prime mortgage problem, is mixed but is believed to be relatively small. China's numerous restrictions on capital flows to and from China limit the ability of individual Chinese citizens and many firms to invest their savings overseas. Thus, the exposure of Chinese private sector firms and individual investors to sub-prime U.S. mortgages is likely to be rather small. On the other hand, the exposure of Chinese government entities, such as the State Administration of Foreign Exchange, the China Investment Corporation (a $200 billion sovereign wealth fund created in 2007),[80] state banks, and state owned enterprises), may be more exposed and may have suffered losses from troubled U.S. mortgage securities. The Chinese government generally does not release detailed information on the holdings of its financial entities, although some of its banks have reported on their supposed level of exposure to sub-prime U.S. mortgage securities. Such entities have generally reported that their exposure to troubled sub-prime U.S. mortgages has been minor relative to their total investments, that they have liquidated such assets or have written off losses, and that they continue to earn high profit margins.[81]

However, Chinese banks are not immune to financial problems. Several indicators show that an economic slowdown has been occurring in China over the past several months that could threaten stability within the banking system. For example, the real estate market in several Chinese cities has exhibited signs of a bubble that is bursting, including a slowdown in construction, falling prices and growing levels of unoccupied buildings. This has increased pressure on the banks to lower interest rates further to stabilize the market, but has raised concerns that doing so could result in higher inflation. In addition, the value of China's main stock market index, the Shanghai Stock Exchange Composite Index, fell by 67.2% from January 1 to October 27, 2008. Finally, China's media reports that export orders have declined sharply. More than half of China's toy exporters shut down in the first seven months of 2008, and toy exports from January to August 2008 were 20.8% lower than they were during the same period in 2007.[82] On November 3, 2008, Chinese Premier Wen Jiabao warned that 2008 would be the "worst in recent times" for China's economic development. As a result, Chinese banks may face a new wave of non-performing loans.

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[79] The section on China was prepared by Wayne M. Morrison, Specialist in Asian Trade and Finance, Foreign Affairs, Defense, and Trade Division.

[80] For an overview of the China Investment Corporation, see CRS report RL34337, *China's Sovereign Wealth Fund*, by Michael F. Martin.

[81] China's holdings of Fannie Mae and Freddie Mac securities are likely to be more substantial, but less risky (compared to other sub-prime securities), especially after these two institutions were placed in conservatorship by the Federal Government in September 2008.

[82] Global Insight, *Country Intelligence Analysis, China*, October 20, 2008.

China's official response to the global financial crisis initially was somewhat limited. On September 27, 2008, Chinese Premier Wen Jiabao reportedly stated in a speech that: "What we can do now is to maintain the steady and fast growth of the national economy and ensure that no major fluctuations will happen. That will be our greatest contribution to the world economy under the current circumstances." [83] On October 8, 2008, China's central bank announced plans to cut interest rates and the reserve-requirement ratio in order to help stimulate the economy. The announcement coincided with announcements by the U.S. Federal Reserve and other central banks of major economies around the world to lower their benchmark interest rates, although, neither China's central bank or the media stated that these measures were taken in conjunction with the other major central banks. On October 21, 2008, China's State Council announced it was considering implementing a new economic stimulus package, which would include an acceleration of construction projects, new export tax rebates, a reduction in the housing transaction tax, increased agriculture subsidies, and expanding lending to small and medium enterprises.[84] On November 4, 2008, China's media reported that Chinese President Hu Jintao would attend the G-20 summit on the financial crisis in Washington, DC, on November 15.

On November 9, 2008, however, the Chinese government announced it would implement a two-year $586 billion stimulus package, mainly dedicated to infrastructure projects. The package would finance programs in 10 major areas, including affordable housing, rural infrastructure, water, electricity, transport, the environment, technological innovation and rebuilding areas hit by disasters (especially, areas that were hit by the May 12, 2998 earthquake).[85]

Analysts debate what role China might play in responding to the global financial crisis, given its nearly $2 trillion in foreign exchange reserves. Some have speculated that China could use some of these reserves to shore up financial institutions around the world, particularly in the United States. Others have contended that China would, in order to help stabilize its largest export market (the United States), use its reserves to purchase some of the large amount of U.S. debt securities that are expected to be issued to help fund the hundreds of billions of dollars that are expected to be spent by the U.S. government to purchase troubled assets and stimulate the economy.[86]

On September 21, 2008, the White House indicated that President Bush had called President Hu to discuss the global financial crisis and steps the United States planned to take to address the crisis. An unnamed Chinese trade official reportedly stated that "the purpose of that call was to ask for China's help to deal with this financial crisis by urging China to hold even more U.S. Treasury bonds and U.S. assets." The official was further quoted as saying that China recognized that it "has a stake" in the health of the U.S. economy, both as a major market for Chinese

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[83] *Chinaview*, September 27, 2008.

[84] Global Insight, *Country Intelligence Analysis, China*, October 20, 2008.

[85] China *Xinhua News Agency*, November 12, 2008.

[86] Such a move would help keep U.S. interest rates relatively low. If China decided not to sharply increase its purchases of U.S. securities, U.S. interest rates could go up.

exports and in terms of preserving the value of U.S.-based assets held by China." and that a stabilized U.S. economy was in China's own interest.[87]

On the other hand, there are a number of reasons why China might be reluctant to boost significantly its purchases of U.S. assets. One concern would be whether increased Chinese investments in the U.S. economy would produce long-term economic benefits for China. Some Chinese investments in U.S. financial companies have fared poorly, and Chinese officials might be reluctant to put additional money into investments that were deemed to be too risky. Secondly, a sharp economic slowdown in the Chinese economy would increase pressure to invest money at home rather than overseas. Many analysts (including some in China) have questioned the wisdom of China's policy of investing a large level of foreign exchange reserves in U.S. government securities, which offer a relative low rate of return, when China has such huge development needs. China may also be reluctant to boost investment in U.S. companies, due to concerns that doing so would be risky or could come under unfavorable scrutiny by Congress.

South Korea. South Korea, Asia's fourth largest economy, has been deeply affected by the crisis, with both the South Korean stock market and the won tumbling throughout October, sometimes precipitously. On October 28, the won reached its lowest point since 1998, when South Korea was in the middle of its IMF support package. Oxford Analytica estimates that foreign investors withdrew a net $25 billion from the Korean stock market between January and late September.[88] Experts say South Korean banks have large dollar-denominated debts, and therefore need to protect their holdings of dollars. This has contributed to the won's fall, and in early October, President Lee Myung-bak invoked patriotism to encourage Korean banks to stop hoarding dollars and buy won.[89]

The government announced a broad economic rescue package on October 19, 2008, promising to guarantee $100 billion in South Korean banks' foreign-currency debt and provide another $30 billion to directly support South Korean banks. (The total amount was equivalent to 14% of the country's GDP.) Struggling with its plunging stock market and currency, President Lee's government has also announced policies in recent weeks to spend up to $9.2 billion to support real-estate developers struggling with unsold apartments, and to provide further financial support to small businesses. On October 27, Korea's central bank cut its prime interest rate by 0.75 percentage points to 4.25%, the largest cut it has made since it began setting base interest rates in 1999. It also said it was considering buying up to $6.9 billion in bonds held by Korean banks to shore up their capital bases.[90]

South Korea has been an enormous economic success, and has bounced back strongly from the Asian Financial Crisis that forced it to turn to the IMF for a $58

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[87] Inside U.S. Trade, *China Trade Extra*, September 24, 2008.

[88] SOUTH KOREA: Seoul Faces Growth and Liquidity Tests, Oxford Analytica, October 8, 2008.

[89] Lee Warns Against Dollar Hoarding, *Korea Times*, October 8, 2008.

[90] South Korea Cuts Key Interest Rate by 75 Basis Points, *Reuters*, October 27, 2008.

billion support package in December 2007. After contracting by 6.9% in 1998, South Korea's GDP bounced back by 9.5% and 8.5% in the ensuing two years. Since 2002, GDP growth has been in the 3%-6% range. However, President Lee has said the current situation is more severe than the 1997 crisis. Economically, South Korea is an outlier within Asia. It is one of the few Asian countries that is running a current account deficit ($12.6 billion in January-August 2008). Its banks are unusually leveraged, with loan-deposit ratios of more than 130%, higher than that in the United States and the EU, and the only East Asian country over 100%.[91]

Other Countries' Moves. Governments around the region have been affected by the crisis, and have issued a range of rescue measures to keep financial markets functioning and shore up economic growth. Other moves include:

Australia, which had seen one of the largest jumps in housing prices in the world in recent years, has seen property prices tumble, leading to a spike in bad loans among Australian banks. Australia's commodities-dependent economy has also been hurt by declining commodities prices, and the Australian dollar has declined substantially in recent weeks. In response, the government issued a full guarantee on all bank deposits in early October, and added a $7 billion fiscal stimulus plan on October 14.

On October 14, The Hong Kong Monetary Authority said it would provide government backing for all of the $773 billion in Hong Kong bank deposits through 2010 as government assistance for banks in Europe and the United States put pressure on Asian regulators to follow suit even though Asian banks tended to be better capitalized. The authority also said that it was prepared to provide capital to the 23 locally incorporated banks if they needed it, following the examples of the United States and Britain.

In early October, Indonesia halted share trading on its stock markets, and then on October 13, when the stock market re-opened, it widened government guarantees on bank deposits.

New Challenges and Policy in Managing Financial Risk[92]

The Challenges

So far, the actions of the United States and other nations in coping with the global financial crisis have been primarily to contain the contagion, minimize losses to society, restore confidence in financial institutions and instruments, and lubricate the wheels of the system in order for it to return to full operation. There is considerable uncertainty, however, over whether the worst of the crisis has passed,

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[91] See Merrill Lynch, "Asia: Risks Rising", October 3, 2008.

[92] Prepared by Dick K. Nanto, Specialist in Industry and Trade, Foreign Affairs, Defense, and Trade Division.

how nations will cope with second phase of the crisis (global recession and the spread of the crisis to emerging markets), and whether the current crisis is an aberration that can be fixed by tweaking the system, or whether it reflects systemic problems that require major surgery. The challenges of the third phase still remain. They arguably are to change regulatory structure and regulations and the global financial architecture to ensure that future crises do not occur or, at least, to mitigate their effects. The fourth phase is to cope with long-term political and social effects of the financial crisis and ensuing slow down in economic growth.

On a more philosophical plane, the fundamental assumption that markets are self correcting and that individuals pursuing their own financial interests like an "invisible hand" tend also to promote the good of the global community has been questioned. Will the losses of this financial crisis hurt investors and institutions enough that the system will become more prudent in the future, or is further regulation and oversight necessary to fill gaps in information and technical expertise to compensate for faulty or incomplete methods of modeling risk, and to provide more resilience in the system to offset human error? A related question is whether there should be a system of controls on flows of capital during a financial crisis that would be aimed at temporarily calming markets.

A related philosophical question for the United States deals with the nature of capitalism. Should U.S. government ownership of stock in private corporations[93] also provide Washington a voice in how the corporations are managed? A key dispute in the Cold War was capitalism versus socialism. Should major companies in the economy be owned by private investors and entrepreneurs or should they be national assets owned and managed by the government? Should the main objective of large companies be to maximize returns to shareholders, or should the government use its investment in company shares to turn management objectives more toward maximizing the national well being? Also, should the government be in the business of "picking winners and losers" in the process that the economist Joseph Schumpeter described as creative destruction in capitalism?[94] Should the government "prop up companies" that should actually be "destroyed" so that stronger and more innovative companies can emerge? Is there really a company that is "too big to fail?"

For other nations of the world, what has become clear from the crisis is that U.S. financial ailments can be highly contagious. Foreign financial institutions are not immune to ill health in American banks, brokerage houses, and insurance companies. The financial services industry links together investors and financial institutions in disparate countries around the world. Investors seek higher risk-adjusted returns in any market. For example, in the "carry trade," investors borrow funds in a country with low interest rates (such as Japan and Switzerland) and invest in higher yielding securities in another country (such as New Zealand, Australia, or

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[93] Does not include government sponsored enterprises, such as Fannie Mae and Freddie Mac.

[94] Creative destruction is a term coined by Joseph Schumpeter to describe what he considered the driving force of capitalism, a process of industrial innovation in which new technologies and firms revolutionize the economy by incessantly destroying the existing economic structure and creating a new one in the process.

the United States). This trade has involved amounts estimated in the hundreds of billions of dollars and has been a major factor in the appreciation of the yen in late 2008 as investors unwound yen carry trade positions.[95] In financial markets, moreover, innovations in one market quickly spread to another, and sellers in one country often seek buyers in another. AIG insurance, for example, appears to have been brought down primarily by its London office, an operation that engaged heavily in credit default swaps.[96] The revolution in communications, moreover, works both ways. It allows for instant access to information and remote access to market activity, but it also feeds the herd instinct and is susceptible to being used to spread biased or incomplete information.

The linking of economies also transcends financial networks. Flows of international trade both in goods and services are affected directly by macroeconomic conditions in the countries involved. In the second phase of the financial crisis, markets all over the world have been experiencing historic declines. Precipitous drops in stock market values are being mirrored in currency and commodity markets. Not only are world prices for petroleum and copper plummeting, but major exporting countries and companies are facing weak markets for their industrial and consumer products.

Given the international nature of financial markets, the rapid movement of capital and information, and the secondary effects of financial problems on the services-and-production side of the economy, there seems to be no international architecture capable of coping with and preventing global crises from erupting. The financial space above nations basically is anarchic with no supranational authority with firm oversight, regulatory, and enforcement powers. There are international norms and guidelines, but most are voluntary, and countries are slow to incorporate them into domestic law. As such, the system operates largely on trust and confidence and by hedging financial bets. The financial crisis has been a "wake-up call" for investors who had confidence in, for example, credit ratings placed on securities by credit rating agencies operating under what some have referred to as "perverse incentives and conflicts of interest." After such trusted AAA and AA ratings led to investments of hundreds of billions of dollars in toxic securities, what will be necessary to restore confidence in the system?

The crisis also has shown that the International Monetary Fund, the international lender of last resort, has limited capital to cope with a large financial crisis that spans both developed and emerging market countries. Its current $250 billion in usable capital is dwarfed by the various rescue packages announced by national governments. As the crisis has spread to smaller countries more within the purview of IMF activities (Iceland, Hungary, and Ukraine), however, the IMF is playing its traditional role in providing stabilization loan packages.

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[95] Gabriele Galati, Alexandra Heath, and Patrick McGuire. "Evidence of Carry Trade Activity," *BIS Quarterly Review*, September 2007.

[96] Morgenson, Gretchen, "Behind Insurer's Crisis, Blind Eye to a Web of Risk," *The New York Times* (Internet edition), September 27, 2008.

Another issue is the mismatch between regulators and those being regulated. The policymakers can be divided between those of national governments and, to an extent, those of international institutions, but the resulting policy implementation, oversight, and regulation almost all rests in national governments (as well as sub-national governments such as states for insurance regulation). Yet many of the financial and other institutions that are the object of new oversight or regulatory activity may themselves be international in presence. They tend to operate in all major markets and congregate around world financial centers (i.e., London, New York, Zurich, Hong Kong, Singapore, Tokyo, and Shanghai) where client portfolios often are based and where institutions and qualified professionals exist to support their activities. The major market for derivatives, for example, is London, even though a sizable proportion of the derivatives, themselves, may be issued by U.S. companies based on U.S. assets. A similar issue exists on the tangible product side of the economy. Multinational producers of consumer and industrial goods can transfer production among supply bases all over the world, but most manufacturing is tied to capital equipment that is fixed in place. Financial transactions, in contrast, can nominally occur anywhere. Unless regulations and constraints apply to other markets as well, transactions can, for example, easily move from New York to London, Zurich, or elsewhere. Could tighter regulations in the United States, for example, induce transactions to move to London?

A related issue is the functional nature of U.S. regulation. Separate regulatory agencies oversee each line of financial service: banking, insurance, securities, and futures. Hence, no single regulator possesses all of the information and authority necessary to monitor systemic risk or the potential that seemingly isolated events could lead to broad dislocation and a financial crisis so widespread that it affects the real economy. Also no single regulator can take coordinated action throughout the financial system. Other countries have addressed their own versions of this problem. The United Kingdom, for example, created a tripartite regulatory and oversight system consisting of the Bank of England, the H.M. Treasury, and a Financial Services Agency (a national regulatory agency for all financial services). Australia and the Netherlands have created systems in which one financial regulatory agency is responsible for prudential regulation of relevant financial institutions and a separate and distinct regulatory agency is responsible for business conduct and consumer protection.[97]

Policy

In making policy changes, Congress faces several fundamental issues. First is whether any long-term policies should be designed to restore confidence and induce return to the normal functioning of a self-correcting system or whether the policies should be directed at changing a system that may have become inherently unstable, a system that every decade or so creates bubbles and then lurches into crisis. [98] For example, in Congressional testimony on October 23, 2008, former Federal Reserve

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[97] U.S. Department of the Treasury. *The Department of the Treasury Blueprint for a Modernized Financial Regulatory Structure.* March 2008. 217 p.

[98] For an analysis of bubbles, see: CRS Report RL33666, *Asset Bubbles: Economic Effects and Policy Options for the Federal Reserve*, by Marc Labonte.

Chairman Alan Greenspan stated that a "once-in-a-century credit tsunami"' had engulfed financial markets, and he conceded that his free-market ideology shunning regulation was flawed.[99] In a recent book, the financier George Soros stated that the currently prevailing paradigm, that financial markets tend towards equilibrium, is both false and misleading. He asserted that the world's current financial troubles can be largely attributed to the fact that the international financial system has been developed on the basis of that flawed paradigm.[100] Could this crisis mark the beginning of the end of "free market capitalism?" On the other hand, the International Monetary Fund has observed that market discipline still works and that the focus of new regulations should not be on eliminating risk but on improving market discipline and addressing the tendency of market participants to underestimate the systemic effects of their collective actions.[101]

A second question deals with what level any new regulatory authority should reside. Should it primarily be at the state, national, or international level? If the authority is kept at the national level, how much power should an international authority have? Should the major role of the IMF, for example, be informational, advisory, and technical, or should it have enforcement authority? Should enforcement be done through a dispute resolution process similar to that in the World Trade Organization, or should the IMF or other international institution be ceded oversight and regulatory authority by national governments?

Bretton Woods II. The second question above is central for those calling for a new Bretton Woods conference. U.K. Prime Minister Gordon Brown called for such a conference to have the specific objective of remaking the international financial architecture.[102]

G-20 Meeting. At the November 15, 2008, summit meeting of the G-20 nations in Washington, DC, leaders are expected to discuss principles in coping with the financial crisis and future steps. In preparation for this summit, European leaders have held several meetings to attempt to coordinate their policy positions.[103] The issues the European leaders reportedly would like to address include (1) strengthening international regulatory standards; (2) strengthening international coordination among financial supervisors; (3) strengthening measures to monitor and coordinate macroeconomic policies; and (4) developing the capacity to address

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[99] Lanman, Scott and Steve Matthews. "Greenspan Concedes to 'Flaw' in His Market Ideology," *Bloomberg News Service*, October 23, 2008.

[100] Soros, George. *The New Paradigm for Financial Markets: The Credit Crisis of 2008 and What it Means* (PublicAffairs, 2008) p. i. Soros proposes a new paradigm that deals with the relationship between thinking and reality and accounts for misconceptions and misinterpretations.

[101] International Monetary Fund. "The Recent Financial Turmoil — Initial Assessment, Policy Lessons, and Implications for Fund Surveillance," April 9, 2008.

[102] Gerstenzang, James. "Bush will Meet with G-20 After Election," *Los Angeles Times*, October 23, 2008.

[103] Marquand, Robert. "French Assertiveness on Credit Crisis Jars Europe," *Christian Science Monitor*, October 30, 2008.

financial crises at the national, regional, and multilateral levels.[104] The European Union reportedly also has called for more powers for the International Monetary Fund, stiffer regulation of credit-rating agencies and hedge funds, and urged a crackdown on risk-taking and bankers' pay. The Europeans also have called for the summit to pursue financial reforms that promote the fight against poverty and climate change, advance the stalled World Trade Organization talks, and combat hunger in the developing world. They also have asked for a late February deadline to prepare "initial measures."[105]

At an EU Summit on November 7, 2008, European leaders reportedly agreed to a common position to bring to the G-20 meeting. The conclusions accepted by the EU summit called for leaders first to agree on principles for reform and then for a 100-day period following the summit to draw up measures based on those principles. After the 100-day period, a second G-20 summit would be held. The European leaders also listed five specific approaches for the November 15 meeting:

- credit rating agencies should submit to registration, surveillance, and rule of governance;
- principles of accounting standards should converge, and the fair-value rule should be reviewed;
- measures should assure that "no market segment, no territory, and no financial institution should escape proportionate and adequate regulation or at least oversight;"
- codes of conduct should be established in the financial sector against excessive risk-taking, including overhauling executive pay and debt securitization policy;
- The International Monetary Fund, aided by the Financial Stability Forum, should be given a leading role in recommending measures needed to restore confidence and stability.[106]

G-7 Meeting. On October 10, 2008, the G-7 finance ministers and central bankers,[107] met in Washington D.C. to try to provide a more coordinated approach to the crisis. A statement released by the group stated that the G-7, "agrees today that the current situation calls for urgent and exceptional action." In addition, the Group agreed to:

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[104] European Commission. "Communication From the Commission, From Financial Crisis to Recovery: A European Framework for Action," October 29, 2008.

[105] Neuger, James G. "Europe Urges Stiffer Regulation, Poses Test for Obama," *Bloomberg*, November 7, 2008.

[106] Bureau of National Affairs, "G-20 Summit, EU Ready to Advance Common Vision at Upcoming G-20 Meeting on Global Crisis," *International Business and Finance Daily*, November 10, 2008.

[107] The G-7 comprises Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States.

- Take decisive action and use all available tools to support systematically important financial institutions and prevent their failure.
- Take all necessary steps to unfreeze credit and money markets and ensure that banks and other financial institutions have broad access to liquidity and funding.
- Ensure that our banks and other major financial intermediaries, as needed, can raise capital from public as well as private sources, in sufficient amounts to re-establish confidence and permit them to continue lending to households and businesses.
- Ensure that our respective national deposit insurance and guarantee programs are robust and consistent so that our real depositors will continue to have confidence in the safety of their deposits.
- Take action, where appropriate, to restart the secondary markets for mortgages and other securitized assets. Accurate valuation and transparent disclosure of assets and consistent implementation of high quality accounting standards are necessary.[108]

The International Monetary Fund. Policy proposals for changes in the international financial architecture have included a major role for the IMF. As a lender of last resort, coordinator of financial assistance packages for countries, monitor of macroeconomic conditions worldwide and within countries, and provider of technical assistance, the IMF has played an important role during financial crises whether international or confined to one member country.

The financial crisis has shown that the world could use a better early warning system that can detect and do something about stresses and systemic problems developing in world financial markets. It also may need some system of what is being called a macro-prudential framework for assessing risks and promoting sound policies. This would not only include the regulation and supervision of financial instruments and institutions but also would incorporate cyclical and other macroeconomic considerations as well as vulnerabilities from increased banking concentration and inter-linkages between different parts of the financial system.[109] In short, some institution could be charged with monitoring synergistic conditions that arise because of interactions among individual financial institutions or their macroeconomic setting.

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[108] *G-7 Finance Ministers and Central Bank governors Plan of Action*, press release HP-1195, October 10, 2008, the United States Department of the Treasury.

[109] Lipsky, John. "Global Prospects and Policies," Speech by John Lipsky, First Deputy Managing Director, International Monetary Fund, at the Securities Industries and Financial Markets Association, New York, October 28, 2008. World Bank. "The Unfolding Crisis, Implications for Financial Systems and Their Oversight," October 28, 2008. p. 8.

However, the IMF's current system of macroeconomic monitoring tends to focus on the risks to currency stability, employment, inflation, government budgets, and other macroeconomic variables. It does not deal directly with how macroeconomic variables and potential synergisms and blurring of boundaries among regulated entities affect prudential risk for insurance, banking, and brokerage houses. The Bank for International Settlements makes recommendations to countries on measures to be undertaken (such as Basel II) to ensure banking stability and capital adequacy, but the financial crisis has shown that the focus on capital adequacy has been insufficient to ensure stability when a financial crisis becomes systemic and involves brokerage houses and insurance companies as well as banks.

The International Monetary Fund[110]

The IMF was conceived in July 1944, when representatives of 45 governments meeting in the town of Bretton Woods, New Hampshire, agreed on a framework for international economic cooperation. The IMF came into existence in December 1945 and now has membership of 185 countries.

The IMF performs three main activities:

- monitoring national, global, and regional economic and financial developments and advising member countries on their economic policies (surveillance);
- lending members hard currencies to support policy programs designed to correct balance of payments problems; and
- offering technical assistance in its areas of expertise, as well as training for government and central bank officials.

The financial crisis has created an opportunity for the IMF to reinvigorate itself and possibly play a constructive role in resolving, or at the least mitigating, the effects of the global downturn. It has been operating on two fronts: (1) through immediate crisis management, primarily balance of payments support to emerging-market and less-developed countries, and (2) contributing to long-term systemic reform of the international financial system.[111]

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[110] Prepared by Martin A. Weiss. For further information see: CRS Report RS22976, *The Global Financial Crisis: The Role of the International Monetary Fund (IMF)*, by Martin A. Weiss.

[111] See: CRS Report RS22976, *The Global Financial Crisis: The Role of the International Monetary Fund (IMF)*, by Martin A. Weiss.

IMF rules stipulate that countries are allowed to borrow up to three times their quota[112] over a three-year period, although this requirement has been breached on several occasions in which the IMF has lent at much higher multiples of quota. In response to the current financial crisis, the IMF has activated its Emergency Financing Mechanism to speed the normal process for loans to crisis-afflicted countries. The emergency mechanism enables rapid approval (usually within 48-72 hours) of IMF lending once an agreement has been reached between the IMF and the national government.

On October 28, 2008, the IMF, the European Union, and the World Bank announced a joint financing package for Hungary totaling $25.1 billion to bolster its economy. The IMF is to lend Hungary $15.7 billion, the EU $8.1 billion, and the World Bank is to provide $1.3 billion. On October 24, the IMF announced an initial agreement on a $2.1 billion two-year loan with Iceland. On October 26, the IMF announced a $16.5 billion agreement with Ukraine. Other countries in talks with the IMF are Belarus and Pakistan. Other potential candidates that have been mentioned for IMF loans include Serbia, Kazakhstan, Lithuania, Latvia, and Estonia.

The IMF also may use its Exogenous Shock Facility (ESF) to provide assistance to certain member countries. The ESF provides policy support and financial assistance to low-income countries facing *exogenous shocks*, events that are completely out of the national government's control. These could include commodity price changes (including oil and food), natural disasters, and conflicts and crises in neighboring countries that disrupt trade. The ESF was modified in 2008 to further increase the speed and flexibility of the IMF's response. Through the ESF, a country can immediately access up to 25% of its quota for each exogenous shock and an additional 75% of quota in phased disbursements over one to two years.

On October 29, 2008, the IMF announced that it plans on creating a new three month short-term lending facility aimed at middle income countries such as Mexico, South Korea, and Brazil. The IMF plans to set aside $100 billion for the new Short-Term Liquidity Facility (SLF). In a unprecedented departure from other IMF programs, SLF loans will have no policy conditionality.[113]

The IMF is not alone in making available financial assistance to crisis-afflicted countries. The International Finance Corporation (IFC), the private-sector lending arm of the World Bank, has announced that it will launch a $3 billion fund to capitalize small banks in poor countries that are battered by the financial crisis. The Inter-American Development Bank (IDB) announced on October 10, 2008 that it will offer a new $6 billion credit line to member governments as an increase to its traditional lending activities. In addition to the IDB, the Andean Development Corporation (CAF) announced a liquidity facility of $1.5 billion and the Latin American Fund of Reserves (FLAR) has offered to make available $4.5 billion in

[112] Each member country of the IMF is assigned a quota, based broadly on its relative size in the world economy. A member's quota determines its maximum financial commitment to the IMF and its voting power. The U.S. quota of about $58.2 billion is the largest.

[113] "IMF to Launch New Facility for Emerging Markets Hit by Crisis," IMF Survey Online, October 29, 2008.

contingency lines. While these amounts may be insufficient should Brazil, Argentina, or any other large Latin American country need a rescue package, they could be very helpful for smaller countries such as those in the Caribbean and Central America that are heavily dependent on tourism and property investments.

Changes in U.S. Regulations and Regulatory Structure. Aside from the international financial architecture, a large question for Congress may be how U.S. regulations might be changed and how closely any changes are harmonized with international norms and standards. Related to that is whether U.S. oversight and regulatory agencies, government sponsored enterprises, credit rating firms, or other related institutions should be reformed, merged, their mandates changed, or rechartered. (Many of these questions are addressed in separate CRS reports.)[114]

As events have developed, policy proposals have been coming forth through the legislative process and from the Administration, but other proposals are emerging from recommendations by international organizations such as the IMF,[115] Bank for International Settlements,[116] and Financial Stability Forum.[117]

The IMF has suggested various principles that could guide the scope and design of measures aimed at restoring confidence in the international financial system. They include:

- employ measures that are comprehensive, timely, clearly communicated, and operationally transparent;
- aim for a consistent and coherent set of policies to stabilize the global financial system across countries in order to maximize impact while avoiding adverse effects on other countries;
- ensure rapid response on the basis of early detection of strains;

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[114] See, for example, CRS Report RL34412, *Averting Financial Crisis*, by Mark Jickling; CRS Report RL33775, *Alternative Mortgages: Causes and Policy Implications of Troubled Mortgage Resets in the Subprime and Alt-A Markets*, by Edward V. Murphy; CRS Report RL34657, *Financial Institution Insolvency: Federal Authority over Fannie Mae, Freddie Mac, and Depository Institutions*, by David H. Carpenter and M. Maureen Murphy; CRS Report RL34427, *Financial Turmoil: Federal Reserve Policy Responses*, by Marc Labonte; CRS Report RS22099, *Regulation of Naked Short Selling*, by Mark Jickling; and CRS Report RS22932, *Credit Default Swaps: Frequently Asked Questions*, by Edward V. Murphy.

[115] For analysis and recommendations by the International Monetary Fund, see: "Global Financial Stability Report, Financial Stress and Deleveraging, Macro-Financial Implications and Policy," October 2008. 246 p.

[116] For information on Basel II, see CRS Report RL34485, *Basel II in the United States: Progress Toward a Workable Framework*, by Walter W. Eubanks.

[117] For recommendations by the Financial Stability Forum, see: "Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience, Follow-up on Implementation," October 10, 2008. 39 p.

- assure that emergency government interventions are temporary and taxpayer interests are protected; and
- pursue the medium-term objective of a more sound, competitive, and efficient financial system.[118]

For the global banking industry, the Basel II framework from the Bank for International Settlements actually has been on the table for some time awaiting full implementation by countries of the world. Basel II is aimed at providing a more risk-sensitive approach to financial market supervision by better aligning capital charges with the underlying risk that banks take on. It is to help reduce the incentive for banks to shift assets off their balance sheets, and it includes methodologies to arrive at minimum capital requirements for credit risk, operational risk and market risk; the supervisory review process, and market disclosure.[119] On July 20, 2007, the United States began implementing pertinent parts of Basel II.[120] Some analysts assert that the current financial crisis has already made Basel II obsolete and call for a Basel III.[121] One analyst considers the Basel capital rules to be an inappropriate basis for an international arrangement among banking supervisors.[122]

On the regulatory level, the Financial Stability forum brings together the major industrialized countries of the world, international financial institutions, and international standards-setting organizations to recommend changes to financial and accounting regulations to be adopted by member countries. It is a voluntary

[118] International Monetary fund. "Global Financial Stability Report: Financial Stress and Deleveraging, Macrofinancial Implications and Policy" (Summary version), October 2008. pp. ix-x.

[119] Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, Office of the Comptroller of the Currency, and Office of Thrift Supervision. "Banking Agencies Reach Agreement on Basel II Implementation." July 20, 2007.

[120] For details on U.S. implementation, see: U.S. Federal Reserve, "Basel II Capital Accord, Basel I Initiatives, and Other Basel-Related Matters." [http://www.federalreserve.gov/generalinfo/basel2/USImplementation.htm#Current]

[121] See, for example, Caprio, Gerald, Jr., Ash Demirguc-Kunt, and Edward J. Kane, "The 2007 Meltdown in Structured Securitization: Searching for Lessons Not Scapegoats," World Bank Working Paper, September 5, 2008.

[122] Tarullo, Daniel K. *Banking on Basel, the Future of International Financial Regulation* (Peterson Institute for International Economics, 2008). p. 5.

organization whose secretariat is at the Bank for International Settlements.[123] The recommendations of the Financial Stability Forum have dealt with the following:

- strengthened prudential oversight of capital, liquidity, and risk management;
- enhancing transparency and valuation;
- changes in the role and uses of credit ratings;
- strengthening the authorities' responsiveness to risks; and
- robust arrangements for dealing with stress in the financial system.[124]

These appear to be the areas for more work by international and national organizations and institutions.

Table 4 lists the major problems raised by the crisis, the targets of policy, and the policies already being taken or possibly to take by various entities in response to the global financial crisis. The long-term policies listed in the table essentially center on issues of transparency, disclosure, risk management, creating buffers to make the system more resilient, dealing with the secondary effects of the crisis, and the interface between domestic and international financial institutions. The length and breadth of the list indicates the extent that the financial crisis has required diverse and draconian action. The number of policies or actions not yet taken and being considered indicate that policymakers may still have a long way to go to rebuild the financial system that has been at the heart of the economic strength of the world.

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[123] The Financial Stability Forum brings together senior representatives of national financial authorities (e.g., central banks, supervisory authorities and treasury departments), international financial institutions, international regulatory and supervisory groupings, committees of central bank experts and the European Central Bank. The FSF is serviced by a small secretariat housed at the Bank for International Settlements in Basel, Switzerland. Members include Australia, Canada, France, Germany, Hong Kong, Italy, Japan, Netherlands, Singapore, Switzerland, United Kingdom, United States (Treasury, Securities & Exchange Commission, and the Federal Reserve System), International Monetary Fund, World Bank, Bank for International Settlements, Organisation for Economic Co-operation and Development, the Basel Committee on Banking Supervision, International Accounting Standards Board, International Association of Insurance Supervisors, International Organisation of Securities Commissions, Committee on Payment and Settlement Systems, Committee on the Global Financial System, and the European Central Bank.

[124] These are areas in which the Financial Stability Forum has made recommendations to the G7 Finance Ministers and central bank Governors on October 10, 2008. See: "The Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience," April 7, 2008, 74 p.

Table 4. Problems, Targets of Policy, and Actions Taken or Possibly to Take in Response to the Global Financial Crisis

Problem	Targets of Policy	Actions Taken or Possibly To Take
Containing the Contagion and Restoring Market Operations		
Bankruptcy of financial institutions	Financial institution, Financial sector	— Capital injection through loans or stock purchases — Takeover of company by government or other company — Allow to go bankrupt
Excess toxic debt	Capital base of debt holding institution	— Writeoff of debt by holding institution — Purchase of toxic debt by government at a discount — Ease mark-to-market accounting requirements
Credit market freeze	Lending institutions	— Coordinated lowering of interest rates by central banks/Federal Reserve — Guarantee short-term, uncollateralized business lending — Capital injection through loans or stock purchases
Consumer runs on deposits in banks and money market funds	Banks Brokerage houses	— Guarantee bank deposits — Guarantee money market accounts — Buy underlying money market securities to cover redemptions
Declining stock markets	Investors Short sellers	— Temporary ban on short sales of stock — Government purchases of stock?
Global recession, rising unemployment, decreasing tax revenues, declining exports	National governments	— Stimulative monetary and fiscal policies — Trade policy? — Support for unemployed?

Problem	Targets of Policy	Actions Taken or Possibly To Take
Coping with Long-Term, Systemic Problems		
Poor underwriting standards Overly high ratings of collateralized debt obligations by rating companies Lack of transparency in ratings	Credit rating agencies Bundlers of collateralized debt obligations Corporate leveraged lenders	— More transparency in factors behind credit ratings and better models to assess risk? — Regulation of credit rating agencies? — changes to the IOSCO Code of Conduct for Credit Rating Agencies? — Strengthen oversight of lenders? — Strengthen disclosure requirements to make information more easily accessible and usable?
Incentive distortions for originators of mortgages (no penalty for mortgage defaults)	Mortgage originators Fannie Mae/Freddie Mac All participants in the originate-to-distribute chain	— Require loan originators and bundlers to provide initial and ongoing information on the quality and performance of securitized assets? — Strengthened oversight of mortgage originators? — Penalties for malfeasance by originators?
Shortcomings in risk management practices Severe underestimation of risks in the tails of default distributions	Investors Regulatory agencies	— More prudent oversight of capital, liquidity, and risk management? — Raise capital requirements for complex structured credit products? — Strengthen authorities' responsiveness to risk? — Set stricter capital and liquidity buffers for financial institutions?
Banks had weak controls over off-balance sheet risks	Bank structured investment vehicles Bank sponsored conduits	— Strengthen accounting and regulatory practices? — Raise capital requirements for off-balance sheet investment vehicles?

Problem	Targets of Policy	Actions Taken or Possibly To Take
Problems for International Policy		
Lack of consistency in regulations among nations and need for new regulations to cope with new risks and exposures	National regulatory and oversight authorities Bank for International Settlements International Monetary Fund	— Implement Basel II (Bank for International Settlements' capital and other requirements for banks) — Bretton Woods II agreement? — New recommendations by Financial Stability Forum? — Establish an Asian or African counterpart to the Financial Stability Forum? — Greater role for the International Monetary Fund?
Countries unable to cope with financial crisis	IMF, Development Banks National monetary authorities and governments	— IMF rescue packages — Loans and swaps by capital surplus countries — Creation of long-term international liquidity pools to purchase assets?
Countries slow to recognize emerging problems in financial systems	National monetary and banking authorities Governments IMF Regional organizations	— Increased IMF surveillance and consultations? — Build more resilience into the system? — Increase reporting requirements?
Lack of political support to implement changes in policy	National political leaders	— International summit meetings — Bilateral and plurilateral meetings and events

Source: Congressional Research Service.
Note: In the Actions to Take column, a "?" indicates that the action or policy has been proposed but is still in development or not yet taken.

Selected Legislation

H.R.1424 [110th] Emergency Economic Stabilization Act of 2008. A bill to provide authority for the Federal Government to purchase and insure certain types of troubled assets for the purposes of providing stability to and preventing disruption in the economy and financial system and protecting taxpayers, to amend the Internal Revenue Code of 1986 to provide incentives for energy production and conservation, to extend certain expiring provisions, to provide individual income tax relief, and for other purposes. (Kennedy, Patrick J.), introduced 3/9/2007, **Public Law No. 110-343** (10/3/2008). Note: H.R.1424 is the vehicle for the 2008 economic rescue legislation. Division A is the Emergency Economic Stabilization Act of 2008; Division B is the Energy Improvement and Extension Act of 2008; and Division C is the Tax Extenders and Alternative Minimum Tax Relief Act of 2008.

H.R.3221 [110th] Housing and Economic Recovery Act of 2008. (Pelosi), introduced 7/30/2007. **Public Law No. 110-289** (7/30/2008). For analysis, see CRS Report RL34623, *Housing and Economic Recovery Act of 2008*, by N. Eric Weiss, et al.

H.R.3666 [110th] Foreclosure Prevention and Homeownership Protection Act (Sutton), introduced 9/25/2007.

H.R.3915 [110th] Mortgage Reform and Anti-Predatory Lending Act of 2007 (Miller, Brad), introduced 10/22/2007, passed House 11/15/2007, referred to Senate 12/3/2007.

H.R.6482 [110th] To direct the Securities and Exchange Commission to establish both a process by which asset-backed instruments can be deemed eligible for NRSRO ratings and an initial list of such eligible asset-backed instruments. (Ackerman), introduced 7/14/2008.

H.R.6230 [110th] Credit Rating Agency Transparency and Disclosure Act. (McHenry), introduced 6/10/2008.

H.R.7104 [110th] National Commission on Financial Collapse and Recovery Act of 2008 (Porter, Jon C.), introduced 9/25/2008.

S.2595 [110th] S.A.F.E. Mortgage Licensing Act of 2008, (Feinstein), introduced 2/6/2008.

S.3652 [110th] Financial Market Investigation, Oversight, and Reform Act of 2008. (Cantwell), introduced 9/29/2008.

S.3677 [110th] Financial Crimes Accountability Act of 2008 (Snowe), introduced 10/1/2008.

Appendix A. British, U.S., and European Central Bank Operations April-Mid-October 2008

	Bank of England	Federal Reserve	European Central Bank	Co-ordinated Central Bank Announcements
May	Announced that expanded three-month long-term repos would be maintained in June and July.	Expanded size of Term Auction Facility (TAF). Extended collateral of Term Securities Lending Facility (TSLF).		Expansion of agreements between Federal Reserve and European Central Bank.
July		Introduced 84-day TAF. Primary Dealer Credit Facility (PDCF) and TSLF extended to January 2009. Authorized the auction of options for primary dealers to borrow Treasury securities from the TSLF.	Announced that it would conduct operations under the 84-day TAF to provide US dollars to European Central Bank counterparties. Announced that supplementary three-month longer-term refinancing operations (LTROs) would be renewed in August and September.	
Sept.	Announced that expanded three-month long-term repos would be maintained in September and October. Announced long-term repo operations to be held monthly. Extended drawndown period for Special Liquidity Scheme 9SLS).	Expanded collateral of PDCF. Expanded size and collateral of TSLF. Announced provision of loans to banks to finance purchase of high quality asset-backed commercial paper from money market mutual funds.	Announced six-month LTROs would be renewed in October, and three-month LTROs would be renewed in November and December. Conducted Special Term Refinancing Operation.	Expansion of agreement between Federal Reserve and European Central Bank. Establishment of swap agreements between Federal Reserve and the Bank of England, subsequently expanded. Bank of England and European Central Bank, in conjunction with the Federal

	Bank of England	Federal Reserve	European Central Bank	Co-ordinated Central Bank Announcements
				Reserve, announced operation to lend U.S. dollars for one week, subsequently extended to scheduled weekly operations.
Oct.	Extended collateral for one-week U.S. dollar repos and for three-month long-term repos. Extended collateral of all extended-collateral sterling long-term repos, U.S. dollar repo operations, and the SLS to include bank-guaranteed debt under the UK Government bank debt guarantee scheme. Announced Operations Standing Facilities and a Discount Window Facility, which together replace existing Standing Facilities.	Announced payment of interest on required and excess reserve balances. Increased size of TAFs. Announced creation of the Commercial paper Funding Facility.	Increased size of six-month supplementary LTROs. Announced a reduction in the spread of standing facilities from 200 basis points to 100 basis points around the interest rate on the main refinancing operation. Introduced swap agreements with the Swiss National Bank.	Announced schedules for TAFs and Forward TAFs for auctions of U.S. dollar liquidity during the fourth quarter. European Central and Bank of England announced tenders of U.S. dollar funding at 7-day, 28-day, 84-day maturities at fixed interest rates for full allotment. Swap agreements increased to accommodate required level of funding.

Source: *Financial Stability Report*, October 2008, the Bank of England. p. 18.

Appendix B. Major Recent Actions and Events of the International Financial Crisis[125]

2008

November 10. The **United States** government announced further aid to **American International Group**, AIG. AIG's September $85 billion loan was reduced to $60 billion; the government bought $40 billion of preferred AIG shares, and $52.5 billion of AIG mortgage securities. The U.S. support of AIG increased from September's $85 billion to $150 billion.

November 9. G-20 meeting of finance ministers and central bank governors in Sao Paulo, **Brazil**, concluded with a communique calling for increased role of emerging economies in reform of Bretton Woods financial institutions, including the World Bank and the International Monetary Fund.

November 9. China announced a 4 trillion Yuan/U.S. $587 billion **domestic stimulus package**. primarily aimed at infrastructure, housing, agriculture, health care, and social welfare spending. This program represents 16% of China's 2007 GDP, and roughly equals total Chinese central and local government outlays in 2006.

November 8. Latvian government took over **Parex Bank**, the second-largest bank in Latvia.

November 7. United States October **employment** report revealed a decline of 240,000 jobs in October, and September job losses revised from 159,000 to 284,000. The U.S. unemployment rate rose from 6.1% to 6.5%, a 14-year high.

November 7. **Moody's** sovereign rating for **Hungary** is reduced from A2 to A3. Despite IMF assistance, financial instability may require "severe macroeconomic and financial adjustment." **Moody's** reduced its ratings of **Latvia** from A3 to A2, before the Latvian statistical office announced Latvian **GDP fell** at a 4.2% annual rate in the third quarter of 2008. Moody's also announced an outlook reduction for **Estonia and Lithuania**.

November 6. IMF approved SDR 10.5 billion/U.S. $15.7 billion Stand-By Arrangement for Hungary. U.S. $6.3 billion is to be immediately available.

November 6. International Monetary Fund announced its updated *World Economic Outlook*. Main findings include that "global activity is slowing quickly", and "prospects for global growth have deteriorated over the past month." The IMF now projects **global GDP growth** for 2009 at 2.2% , 3/4 of a percentage point lower than projections announced in October, 2008. It projects **U.S. GDP growth** at 1.4% in 2008 and -0.7% in 2009.

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[125] Prepared by J. Michael Donnelly, Information Research Specialist, Knowledge Services Group.

November 6. The **European Central Bank**, ECB, reduced its key **interest rate** from 3.75% to 3.25%. In two months the ECB has reduced this rate from 4.25% to 3.25%. The **Danish Central Ban**k lowered its key lending rate from 5.5% to 5%. The **Czech National Bank** reduced its interest rate from 3.5% to 2.75%. In **South Korea**, the Bank of Korea reduced its key interest rate from 4.25% to 4%. During October the Bank of Korea reduced its rate from 5.25% to 4.25%.

November 4. United States Institute of Supply Management's **manufacturing index** fell 4.6 points in October to 38.9, after previously falling in September. The export orders component of the manufacturing index fell 11 points in October to 41, following a drop of 5 points in September. 41 is the lowest level in this **export index** in 20 years. Exports have been the strongest sector in U.S. manufacturing during the past year.

November 4. Australia. Reserve Bank of Australia lowered its overnight **cash rate** by 75 basis points to 5.25%, the lowest Australian rate since March 2005.

November 4. **Indian** Prime Minister Manmohan Singh established a **Cabinet-level committee** to evaluate the effect of the financial crisis on India's economy and industries. This follows the **November 2 Indian and Pakistani Central banks**' actions to boost liquidity. India cut its short-term lending rate by 50 basis points to 7.5% and reduced its cash reserve ratio by 100 basis points to 5.5%.

November 4. **Chilean** President Michelle Bachelet announced a U.S.$1.15 billion **stimulus** package to boost the housing market and channel credit into small and medium businesses.

November 3. **Russian** Prime Minister Vladimir Putin reported measures to support the real economy. The measures will include temporary preferences for domestic producers for state procurement contracts, subsidizing interest rates for loans intended to modernize production; and tariff protection for a number of industries such as automobiles and agriculture. The new policy aims to support exporters.

October 31. Three of the six **Gulf Cooperation Council**, GCC, countries, **Bahrain, Kuwait and Saudi Arabian central banks** reduced **interest rates** to follow the actions of the U.S. Federal Reserve and other central banks.

October 31. Kazakhstan government will make **capital injection**s into its **top four banks**, Halyk Bank, Kazkommertsbank, Alliance Bank and BTA Bank.

October 31. The U.S. Commerce Department reported that **consumer spending** fell 0.3% in September after remaining flat in the previous month. On a year-to-year basis, spending was down 0.4%, the first such drop since the recession of 1991. Consumer spending has not grown since June.

October 30. The U.S. Bureau of Economic Analysis reported that **U.S. real gross domestic product** decreased 0.3 per cent in the third quarter of 2008 after increasing 2.8 per cent in the second quarter of 2008.

October 29. The **U.S. Federal Reserve** lowered its target for the federal funds rate 50 basis points to 1 per cent. It also approved a 50 basis point decrease in the discount rate to 1.25 per cent. The Federal Reserve also announced establishment of temporary reciprocal currency arrangements, or swap lines, with the Banco Central do Brasil, the Banco de Mexico, the Bank of Korea, the Monetary Authority of Singapore, and the Reserve Bank of New Zealand. Swap lines are designed to help improve liquidity conditions in global financial markets.

October 29. **IMF** approved the creation of a **Short-Term Liquidity Facility**, established to support countries with strong policies which face temporary liquidity problems.

October 28. The IMF, the European Union, and the World Bank announced a joint financing package for **Hungary** totaling $25.1 billion to bolster its economy. The IMF is to lend Hungary $15.7 billion, the EU $8.1 billion, and the World Bank $1.3 billion.

October 28. The U.S. Conference Board said that its **consumer confidence** index has dropped to an all-time low, from 61.4 in September to 38 in October.

October 27. **Iceland**'s **Kaupthing Bank** became the first European borrower to default on yen-denominated bonds issued in Japan (samurai bonds).

October 26. The IMF announced it is set to lend **Ukraine** $16.5 Billion.

October 24. IMF announced an outline agreement with **Iceland** to lend the country $2.1 billion to support an economic recovery program to help it restore confidence in its banking system and stabilize its currency.

October 23. President Bush called for the **G-20** leaders to meet on November 15 in Washington, DC to deal with the global financial crisis.

October 22. **Pakistan** sought help from the IMF to meet balance of payments difficulties and to avoid a possible economic meltdown amid high fuel prices, dwindling foreign investment and soaring militant violence.

G-20. The Group of 20 Finance Ministers and Central Bank Governors from industrial and emerging-market countries is to meet in Sao Paulo, Brazil on November 8-9, 2008, to discuss key issues related to global economic stability.

October 20. The **Netherlands** agreed to inject €10 billion ($13.4 billion) into **ING Groep** NV, a global banking and insurance company. The investment is to take the form of nonvoting preferred shares with no maturity date (ING can repay the money on its own schedule and will have the right to buy the shares back at 150% of the issue price or convert them into ordinary shares in three years). The government is to take two seats on ING's supervisory board; ING's executive-board members are to forgo 2008 bonuses; and ING said it would not pay a dividend for the rest of 2008.

October 20. **Sweden** proposed a financial stability plan, which includes a 1.5 trillion Swedish kronor ($206 billion) bank guarantee, to combat the impact of the economic crisis.

October 20. The UN**'s International Labor Organization** projects that the global financial crisis could add at least 20 million people to the **world's unemployed**, bringing the total to 210 million by the end of 2009.

October 19. **South Korea** announced that it would guarantee up to $100 billion in foreign debt held by its banks and would pump $30 billion more into its banking sector.

October 18. President Bush, President Nicolas Sarkozy of France, and the president of the European Commission issued a joint statement saying they agreed to "reach out to other world leaders" to propose an **international summit meeting** to be held soon after the U.S. presidential election, with the possibility of more gatherings after that. The Europeans had been pressing for a meeting of the Group of 8 industrialized nations, but President Bush went one step further, calling for a broader global conference that would include "developed and developing nations" — among them China and India.

October 17. The **Swiss** government said it would take a 9% stake ($5.36 billion) in **UBS**, one of the country's leading banks, and set up a $60 billion fund to absorb the bank's troubled assets. UBS had already written off $40 billion of its $80 billion in "toxic American securities." The Swiss central bank was to take over $31 billion of the bank's American assets (much of it in the form of debt linked to subprime and Alt-A mortgages, and securities linked to commercial real estate and student loans).

October 15. The **G8** leaders (Canada, France, Germany, Italy, Japan, Russia, the United Kingdom and the United States, and the European Commission) stated that they were united in their commitment to resolve the current crisis, strengthen financial institutions, restore confidence in the financial system, and provide a sound economic footing for citizens and businesses. They stated that changes to the regulatory and institutional regimes for the world's financial sectors are needed and that they look forward to a leaders' meeting with key countries at an appropriate time in the near future to adopt an agenda for reforms to meet the challenges of the 21st century.

October 14. In coordination with European monetary authorities, the **U.S. Treasury, Federal Reserve, and Federal Deposit Insurance Corporation** announced a **plan to invest up to $250 billion** in preferred securities of **nine major U.S. banks** (including **Citigroup, Bank of America, Wells Fargo, Goldman Sachs and JPMorgan Chase**). The FDIC also became able to temporarily guarantee the senior debt and deposits in non-interest bearing deposit transaction accounts (used mainly by businesses for daily operations).[126]

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[126] U.S. Treasury. "Joint Statement by Treasury, Federal Reserve and FDIC." Press Release (continued...)

October 13. **U.K**. Government provided $60 billion and took a 60% stake in **Royal Bank of Scotland** and 40% in **Lloyds TSB** and **HBOS**.

October 12-13. Several European countries (**Germany, France, Italy, Austria, Netherlands, Portugal, Spain, and Norway**) announced **rescue plans** for their countries worth as much as $2.7 trillion. The plans were largely consistent with a U.K. model that includes concerted action, recapitalization, state ownership, government debt guarantees (the largest component of the plans), and improved regulations.

October 8. In a coordinated effort, the **U.S. Federal Reserve**, the **European Central Bank**, the **Bank of England** and the **central banks of Canada and Sweden** all reduced **primary lending rates** by a half percentage point. **Switzerland** also cut its benchmark rate, while the **Bank of Japan** endorsed the moves without changing its rates. The **Chinese central bank** also reduced its key interest rate and lowered bank reserve requirements. The Federal Reserve's benchmark short-term rate stood at 1.5% and the European Central Bank's at 3.75%.

October 5. The **German** government moved to guarantee all private savings accounts and arranged a bailouts for **Hypo Real Estate**, a German lender. A week earlier, **Fortis**, a large banking and insurance company based in Belgium but active across much of Europe, had received €11.2 billion ($8.2 billion) from the governments of the Netherlands, Belgium and Luxembourg. On October 3, the Dutch government seized its Dutch operations and on October 5, the Belgian government helped to arrange for **BNP-Paribas**, the French bank, to take over what was left of the company.

October 3. **U.S. House of Representatives** passes 110th Congress bill H.R. 1424, Financial Institutions Rescue bill, clearing it for Presidential signing or veto. **President signs** bill into law, P.L. 110-343, the **Emergency Economic Stabilization Act of 2008**, sometimes referred to as the Troubled Assets Relief Program, TARP. The new bill's title includes its purpose:

"A bill to provide authority for the Federal Government to purchase and insure certain types of troubled assets for the purposes of providing stability to and preventing disruption in the economy and financial system and protecting taxpayers..."

October 3. **Britain**'s Financial Services Authority said it had raised the amount guaranteed in savings accounts to £50,000 ($88,390) from £35,000. **Greece** also stated that it would guarantee savings accounts regardless of the amount.

October 3. **Wells Fargo Ban**k announced a takeover of **Wachovia Corp**, the fourth-largest U.S. bank. (Previously, Citibank had agreed to take over Wachovia.)

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[126] (...continued)
HP-1206, October 14, 2008.

October 1. **U.S. Senate** passed H.R. 1424, amended, Financial Institutions Rescue bill.

September/October. On September 30, **Iceland**'s government took a 75% share of **Glitnir**, Iceland's third-largest bank, by injecting €600 million ($850 million) into the bank. The following week, it took control of **Landsbanki** and soon after placed Iceland's largest bank, **Kaupthing**, into receivership as well.

September 26. **Washington Mutual** became the largest thrift failure with $307 billion in assets. **JPMorgan Chase** agreed to pay $1.9 billion for the banking operations but did not take ownership of the holding company.

September 22. **Ireland** increased the statutory limit for the deposit guarantee scheme for banks and building societies from €20,000 ($26,000) to €100,000 ($130,000) per depositor per institution.

September 21. The **Federal Reserve** approved the transformation of **Goldman Sachs** and **Morgan Stanley** into bank holding companies from investment banks in order to increase oversight and allow them to access the Federal Reserve's discount (loan) window.

September 18. **Treasury Secretary Paulson** announced a **$700 billion economic stabilization proposal** that would allow the government to buy toxic assets from the nation's biggest banks, a move aimed at shoring up balance sheets and restoring confidence within the financial system. An amended bill to accomplish this was passed by Congress on October 3.

September 16. The **Federal Reserve** came to the assistance of **American International Group, AIG**, an insurance giant on the verge of failure because of its exposure to exotic securities known as credit default swaps, in an $85 billion deal (later increased to $123 billion).

September 15. **Lehman Brothers** bankruptcy at $639 billion is the largest in the history of the United States.

September 14. **Bank of America** said it will buy **Merrill Lynch** for $50 billion.

September 7. **U.S. Treasury** announced that it was taking over **Fannie Mae** and **Freddie Mac,** two government-sponsored enterprises that bought securitized mortgage debt.

August 12. According to Bloomberg, **losses** at the **top 100 banks** in the world from the U.S. subprime crisis and the ensuing credit crunch exceeded $500 billion as writedowns spread to more asset types.

May 4. Finance ministers of **13 Asian nations** agreed to set up a foreign exchange pool of at least $80 billion to be used in the event of another regional

financial crisis. **China, Japan** and **South Korea** are to provide 80% of the funds with the rest coming from the 10 members of ASEAN.

March. The **Federal Reserve** staved off a **Bear Stearns** bankruptcy by assuming $30 billion in liabilities and engineering a sale of Bear Sterns to **JPMorgan Chase** for a price that was less than the worth of Bear's Manhattan office building.

February 17. The **British** government decided to "temporarily" nationalize the struggling housing lender, **Northern Rock**. A previous government loan of $47 billion had proven ineffective in helping the company to recover.

January. Swiss banking giant **UBS** reported more than $18 billion in writedowns due to exposure to U.S. real estate market. **Bank of America** acquired **Countrywide Financial**, the largest mortgage lender in the United States.

2007

July/August. **German** banks with bad investments in U.S. real estate are caught up in the evolving crisis, These include **IKB Deutsche Industriebank, Sachsen LB** (Saxony State Bank) and **BayernLB** (Bavaria State Bank).

July 18. Two battered **hedge funds** worth an estimated $1.5 billion at the end of 2006 were almost entirely worthless. They had been managed by **Bear Stearns** and were invested heavily in subprime mortgages.

July 12. The **Federal Deposit Insurance Corp**. took control of the $32 billion **IndyMac Bank (Pasadena, CA)** in what regulators called the second-largest bank failure in U.S. history.

March/April. **New Century Financial** corporation stopped making new loans as the practice of giving high risk mortgage loans to people with bad credit histories becomes a problem. The **International Monetary Fund** warned of risks to global financial markets from weakened US home mortgage market.